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CADD
DRAWINGS
ELECTRICAL, MECHANICAL, CIVIL, RECREATION, ROADS, MAPS, ARCHITECTURAL

JANUARY 1989

BINDER—5.DWG

923354

CADINDEX

DRAWINGS IN \STDS.DWG FILE

NAME	BYTES	DATE	
1-100FT	8786	Oct 12, 1988	1"=100FT STD DRAWING BORDER
1-10FT	8583	Oct 12, 1988	1"=10FT STD DRAWING BORDER
1-1FT	8760	Oct 12, 1988	1"=1FT STD DRAWING BORDER
1-20FT	8776	Oct 12, 1988	1"=20FT STD DRAWING BORDER
1-250FT	8786	Oct 12, 1988	1"=250FT STD DRAWING BORDER
1-25FT	8778	Oct 12, 1988	1"=25FT STD DRAWING BORDER
1-50FT	8782	Oct 12, 1988	1"=50FT STD DRAWING BORDER
1LINBDRN	7461	Dec 12, 1988	SKINNY ONE LINE BORDER 36X24
3RDSCHEM	9656	Dec 12, 1988	ONE THIRD OF A 36X24 SCHEMATIC BORDER
APPROVAL	2443	Nov 03, 1987	SIGNATURE BLOCK FOR DRAWING APPROVAL
ASPECT_R	7062	Nov 03, 1988	ADJUST YOUR MONITOR ASPECT RATIO
CONTROLS	157246	Sep 07, 1989	DIGITIZER TABLET MENU FOR CONTROLS DWG.
DIALER	18805	Feb 08, 1989	Telephone Dialer Connections
E0000100	104810	Oct 25, 1988	Well Pump to Tank Ladder Schematic Diagram
E0000200	71406	Oct 25, 1988	Well Pump Motor 1 Ph-Wire-Dialer
E0000300	64023	Oct 25, 1988	Well Pump Motor-3 Ph-Chlor-Dialer
E0000400	44819	Oct 25, 1988	Well Pump to Tank Control Panel/Term Block
E0000500	109831	Oct 25, 1988	Duplex Pump Station Ladder Schematic
E0000600	34519	Oct 25, 1988	Duplex Pump Pr Cont Panel Layout/Term Blk
E0000700	56945	Oct 25, 1988	3 Ph Duplex Pump Station Ladder Schematic
E0000800	73145	Oct 25, 1988	1 Ph Duplex Pump Station Ladder Schematic
E0000900	91809	Oct 25, 1988	Well Pump-DC-to Tank Ladder-Sht 1
E0001000	96425	Oct 25, 1988	Well Pump-DC-to Tank Ladder-Sht 2
E0001100	62196	Oct 25, 1988	Well Pump-DC-To Tank-Ladder-Motor-Wire
E0001200	101174	Oct 25, 1988	Control Symbols-Menu-Standard-ES001-ES168
E0001300	69039	Oct 26, 1988	Motor Starters - Det ES500 - ES504
E0001700	54383	Nov 05, 1987	Gas & Oil Storage Bldg
E0001800	125017	Aug 03, 1988	Electrical Symbols-ES201-ES368
E0001900	37996	Nov 05, 1987	Relays Bases Details
E0002000	201395	Nov 05, 1987	Duplex Pump Station Electrial Plan
E0002100	136992	Nov 05, 1987	Well Electrical Plan and Details
E0002500	119876	Nov 05, 1987	Conduit Stub/Conc Found Det ED000011-18
E0002600	122073	Nov 05, 1987	Cond Stub/Pcell/Tstat/Prot Det ED000019-26
E0002700	179842	Nov 05, 1987	Details ED000027-ED000040
E0002900	92205	Nov 05, 1987	Pump House Electrical Plan
E0002901	61443	Nov 05, 1987	Pump House-ED000028.11 CD000001
E0003500	57097	Nov 05, 1987	Annunc Control Det ED000099-102, 126,128
E0003600	87195	Nov 05, 1987	Details ED000110-ED000114
E0003601	152893	Nov 05, 1987	Details ED000105-ED000109
E0003700	90062	Nov 05, 1987	Details ED000115-118
E0003701	68508	Nov 05, 1987	Details ED000119,121-124
E0003900	104718	Nov 05, 1987	Terminal Block Details ED000129-136
E0090000	120925	Nov 05, 1987	Wood Water Tank Electrical Plan
E0090100	138487	Nov 05, 1987	Concrete Water Tank Electrical Plan
E0090200	108119	Nov 05, 1987	Steel Water Storage Reservoir
E0090300	105304	Nov 05, 1987	Steel Water Tower and Tank
E0090700	25108	Nov 05, 1987	Details ED000072-75; Panelboard Circuits
E0090900	138455	Nov 05, 1987	Details ED000091-ED000096
E0092400	154386	Nov 05, 1987	Details ED000007-ED000010
EBOR-01N	8428	Nov 29, 1988	12 INCHES = 1FT STD BORDER 36X24
EBOR-02N	8592	Nov 29, 1988	1/2 INCH = 1FT STD BORDER
EBOR-04N	8590	Nov 29, 1988	1/4 INCH = 1FT STD BORDER
EBOR-08N	8430	Nov 29, 1988	1/8 INCH = 1FT STD BORDER
EBOR-16N	8431	Nov 29, 1988	1/16 INCH = 1FT STD BORDER
EBOR-32N	8432	Nov 29, 1988	1/32 INCH = 1FT STD BORDER
ELECTRIC	138331	Sep 07, 1988	Electrical Controls CAD Menu
FONTS	12285	Jun 17, 1988	ACAD FONTS DRAWING
FSLOGO	79607	Jul 19, 1988	FS Shield Logo
HYD-PNEU	18327	Feb 09, 1988	HYDRO-PNEUMATIC ONE LINE DIAGRAM
HYDRAUL	7870	May 31, 1988	WELL PUMP TO TANK ONE LINE DIAGRAM
HYDRAUL1	7727	May 31, 1988	Well Process/Switch Function
LPSTRIP	22740	Nov 03, 1987	Control Cable Lightning Protector Conn's
MOTRDATA	6057	Oct 30, 1987	Well Pump Motors-Submersible
PEDESTAL	76141	Aug 10, 1987	Pedestal for Field Sensors
POINTS	5451	Nov 03, 1987	ACAD Points
PROTO-C	196815	Nov 30, 1988	CONTROLS PROTO DWG. W/DEFINED BLOCKS
PROTO-E	60654	Oct 19, 1988	ELECTRIC PROTO DWG. W/DEFINED BLOCKS
SCALEBAR	2524	Sep 09, 1988	Scale Bar
TRANSCLO	24801	Feb 20, 1987	Transclosure Details
WIRETABL	4532	Nov 03, 1987	Wire Table

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NAME	BYTES	DATE	DESCRIPTION
ED000001	12218	Oct 29, 1987	Overhead service entrance
ED000002	15519	Oct 29, 1987	Overhead service entrance-w/transformer
ED000003	51719	Oct 29, 1987	Service Conn Detail-w/Wire Connections
ED000004	27055	Oct 29, 1987	Service connection detail
ED000005	76291	Oct 29, 1987	Splice vault
ED000006	59823	Oct 29, 1987	Splice vault detail
ED000007	32081	Oct 29, 1987	Power cable tap splice detail
ED000008	24498	Oct 29, 1987	Control cable grounding
ED000009	137898	Oct 29, 1987	Control cable splice detail
ED000010	12976	Oct 29, 1987	Power cable splice detail
ED000011	14948	Oct 29, 1987	Concrete Foundation Grding-w/Bonding Jumper
ED000012	13994	Oct 29, 1987	Concrete foundation grounding
ED000013	7961	Oct 29, 1987	Concrete slab gounding
ED000014	9072	Oct 29, 1987	Concrete slab grounding-w/bonding jumper
ED000015	16397	Oct 29, 1987	Conduit stubout detail-standard
ED000016	23815	Oct 29, 1987	Conduit stubout-w/bldg. footing
ED000017	24094	Oct 29, 1987	Conduit stubout-w/Conduit spec.
ED000018	31402	Oct 29, 1987	Conduit stubout-larger scale
ED000019	32095	Oct 29, 1987	Conduit stubout
ED000020	22919	Oct 29, 1987	Conduit wall & stubout seal
ED000021	28149	Oct 29, 1987	Ground rod detail
ED000022	5442	Oct 29, 1987	Photocell cell bypass
ED000023	7248	Oct 29, 1987	Photocell & thermostat connection details
ED000024	5176	Oct 29, 1987	Thermostat bypass switch
ED000025	7047	Oct 29, 1987	Probe detail
ED000026	24992	Oct 29, 1987	Probe holder
ED000027	11143	Mar 02, 1988	Heater mounting detail
ED000028	10939	Mar 02, 1988	Compression Cable Cord Grip & Sealoff Det
ED000029	16512	Mar 02, 1988	Float Switch Mounting Detail- Steel Tank
ED000030	14417	Mar 02, 1988	Float Sw Mounting Det-w/Expanding Anchors
ED000031	23196	Mar 02, 1988	Float Sw Mting Det-w/Cord Support Bracket
ED000032	11294	Mar 02, 1988	Footing grounding
ED000033	19804	Mar 02, 1988	Power pedestal detail
ED000034	20666	Mar 02, 1988	Control cable pedestal detail
ED000035	14326	Mar 02, 1988	Electrical cable marker detail
ED000036	25212	Mar 02, 1988	Trailer power pedestal
ED000037	9039	Mar 02, 1988	Conduit support detail
ED000038	7158	Mar 02, 1988	Snap together raceway
ED000039	13699	Mar 02, 1988	Conduit mounting detail
ED000040	6191	Mar 02, 1988	Bell switch mounting detail
ED000042	13883	Oct 29, 1987	Float switch cord support bracket
ED000043	14643	Oct 29, 1987	J-box float switch detail
ED000044	19366	Oct 29, 1987	Control Cable Lightning Protector Conn
ED000046	29956	Oct 29, 1987	J-Box Float Switch Detail-Concrete Tank
ED000047	16812	Oct 29, 1987	J-Box Floatswitch Detail-Steel Tank
ED000048	8099	Oct 29, 1987	plan view of roof segment
ED000049	27586	Oct 29, 1987	Float Switch J-Box Detail-Tower Tank
ED000050	28229	Oct 29, 1987	Water tower conduit, J-box & ground detail
ED000051	34653	Oct 29, 1987	Fiberglass well enclosure
ED000052	13805	Oct 29, 1987	Fbrglass Enc Anch Bolt & Hold-Down Clips
ED000060	6254	Mar 24, 1988	Power Transfer Switch
ED000072	13383	Mar 02, 1988	Form (Panel, loc., desc., etc. - for 12)
ED000073	8845	Mar 02, 1988	Form (Panel, loc., desc., etc. - for 20)
ED000074	9209	Mar 02, 1988	Form (Panel, loc., desc., etc. - for 30)
ED000075	9965	Mar 02, 1988	Form (Panel, loc., desc., etc. - for 42)
ED000078	17927	Oct 29, 1987	RTD-3 Wire mounting detail
ED000079	32205	Oct 29, 1987	Unit Cooler Fan Motor Wiring Diagram
ED000080	11768	Oct 29, 1987	Chiller 1 & 2 control wiring Connections
ED000081	4984	Oct 29, 1987	R.H.-1 Mounting detail
ED000082	14147	Oct 29, 1987	Sensor mounting detail
ED000083	12597	Oct 29, 1987	Pilot lights & 3-way switch wiring diagram
ED000084	7401	Oct 29, 1987	U.C. fans -D.L. detail
ED000085	15311	Oct 29, 1987	Sensing device cover detail
ED000088	4461	Oct 29, 1987	Motorized dampers detail
ED000094	41132	Oct 29, 1987	Splice vault (Plastic)
ED000095	10060	Mar 02, 1988	Annunciator control enclosure
ED000100	8400	Mar 02, 1988	Annunciator front panel layout
ED000101	13029	Mar 02, 1988	Annunciator control panel
ED000102	11754	Mar 02, 1988	Annunciator control enclosure
ED000105	16996	Mar 02, 1988	Power pad detail
ED000106	24010	Mar 02, 1988	Transformer pad detail
ED000107	73757	Mar 02, 1988	Transformer pad and cable vault
ED000108	8062	Mar 02, 1988	Field installed water system control panel

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ED000109	25215	Mar 02, 1988	Phase converter wiring and connections
ED000110	13681	Mar 02, 1988	Converter/control panel elevation
ED000111	10452	Mar 02, 1988	Remote alarm indicator panel layout
ED000112	8192	Mar 02, 1988	Alarm indicator ladder schematic
ED000113	13670	Mar 02, 1988	Reduced voltage starter
ED000114	25647	Mar 02, 1988	Alarm panel
ED000115	28733	Mar 02, 1988	Turbidity monitor wiring
ED000116	27187	Mar 02, 1988	Turbidity sensor piping detail
ED000117	29761	Mar 02, 1988	Turbidity monitor connections
ED000118	56687	Mar 02, 1988	Turbidity sensor mounting
ED000119	11984	Mar 02, 1988	Support bracket/adapter assy.
ED000121	17363	Mar 02, 1988	Explosion proof/Submers Plug and Rec Det
ED000122	9967	Mar 02, 1988	Valve wiring diagram-w/9 valve J-box
ED000123	8575	Mar 02, 1988	Valve wiring diagram-w/5 Valve J-box
ED000124	21778	Mar 02, 1988	Differential Pressure Switch
ED000126	10749	Mar 02, 1988	Host trailer power pedestal-side view
ED000128	5904	Mar 02, 1988	Backwash pushbutton wiring
ED000129	13280	Mar 02, 1988	Ctrl cable terminal blk connect -1 thru 12
ED000130	14385	Mar 02, 1988	Ctrl cable terminal blk connect-13 thru 25
ED000131	14272	Mar 02, 1988	Ctrl cable terminal blk connect-26 thru 38
ED000132	13471	Mar 02, 1988	Ctrl cable terminal blk connect-39 thru 50
ED000133	14272	Mar 02, 1988	Ctrl cable terminal blk connect-51 thru 63
ED000134	13318	Mar 02, 1988	Ctrl cable terminal blk connect-64 thru 75
ED000135	12363	Mar 02, 1988	Ctrl cable terminal blk connect-76 thru 86
ED000136	15189	Mar 02, 1988	Ctrl cable terminal blk connect-87 thru 100
ED000137	20272	Oct 29, 1987	Electrical mounting channel detail
ED000138	20908	Oct 29, 1987	Sleeve detail
ED000139	5651	Mar 24, 1988	Isolated Ground Receptacle detail
ED000140	17345	Mar 24, 1988	Light Pole Foundation detail
ED000141	6192	Mar 24, 1988	Shutdown Interlock diagram
ED000142	7215	Mar 02, 1988	Lighting Contactor (LC-1) diagram

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NAME	BYTES	DATE	DESCRIPTION
51-1	7,728	Feb 29, 1988	Inline Valve
51-2	15,947	Feb 29, 1988	Service Valve
51-3	13,659	Feb 29, 1988	Drain Valve
51-4	10,206	Feb 29, 1988	Air Release Valve
51-5	6,620	Feb 29, 1988	Pressure Reducing Valve
51-6	21,738	Feb 29, 1988	Valve Box-Cast Iron
51-7	23,251	Feb 29, 1988	Valve Box-Plastic
51-8	21,497	Feb 29, 1988	Valve-Meter Box
51-9	11,006	Feb 29, 1988	Valve Rod - 2" Dia. and Larger
51-10	6,331	Feb 29, 1988	Valve Rod - 1-1/2" and Smaller
51-11	11,081	Feb 29, 1988	Flap Valve for Drain Outlet
51-12	40,552	Aug 24, 1988	Waste Water Sump & Hydrant
51-21	12,971	Feb 29, 1988	Waterline Trench
51-22	16,738	Feb 29, 1988	Waterline Trench - Class A Backfill
51-23	12,345	Feb 29, 1988	WaterlineS Trench - Class A Backfill
51-24	15,099	Feb 29, 1988	Waterline and Control Cable Trench
51-25	22,187	Feb 29, 1988	WL & Control Cable Trench-Class A Backfill
51-26	15,124	Feb 29, 1988	Waterline with Control and Power Cable Tren
51-27	13,954	Feb 29, 1988	Waterline Marker Post
51-28	7,327	Feb 29, 1988	Water Meter
51-29	26,792	Feb 29, 1988	1-1/2" Fire Hydrant
51-30	30,685	Feb 29, 1988	4-1/2" Fire Hydrant
51-31	21,389	Feb 29, 1988	Frost-Proof Hydrant
51-32	25,253	Feb 29, 1988	Post Hydrant with Sump
51-33	25,300	Feb 29, 1988	Post Hydrant-Drinking Fountain
51-34	11,493	Feb 29, 1988	Post Faucet
51-35	77,125	Feb 29, 1988	Concrete Thrust Blocks and Pipe Anchors
51-36	32,657	Feb 29, 1988	Mobile Home Water Hookup with Thermostat
51-37	38,985	Feb 29, 1988	Mobile Home Water Hookup without Thermostat
51-38	11,717	Feb 29, 1988	Drain Line Trench
51-41	15,671	Feb 29, 1988	Sewerline Trench
51-42	36,470	Feb 29, 1988	Service Connection Deep Sewer
51-43	20,584	Feb 29, 1988	Service Connection-Shallow Sewer
51-44	16,206	Feb 29, 1988	Sewer Cleanout
51-45	20,480	Feb 29, 1988	Sewerline-Pipe Anchor
51-46	24,442	Feb 29, 1988	Pressure-Gravity Manhole-Plan
51-47	35,213	Feb 29, 1988	Pressure-Gravity Manhole-Section
51-48	19,614	Feb 29, 1988	Standard Gravity Manhole-Plan
51-49	33,386	Feb 29, 1988	Standard Gravity Manhole-Section

51-50	28,400	Feb 29, 1988	Flat Slat Manhole
51-51	13,642	Feb 29, 1988	Locking M.H. Frame and Cover
51-52	13,121	Feb 29, 1988	Watertight M.H. Frame and Cover
51-53	14,406	Feb 29, 1988	Air Test Stand
51-54	9,945	Feb 29, 1988	Absorption-Trench and Lateral
51-55	5,312	Feb 29, 1988	Drainfield Pipe Transition
51-56	16,639	Feb 29, 1988	Mobile Home Sanitary Sewer Hookup
51-57	21,436	Feb 29, 1988	Recreation Vehicle Sewer Hookup
51-58	9,800	Feb 29, 1988	Recreation Vehicle Vent
51-59	15,761	Feb 29, 1988	Recreation Vehicle Cleanout & Vent
51-60	13,656	Feb 29, 1988	Sewer Force Main and Telephone Cable Trench
51-61	19,955	Feb 29, 1988	Observation Well
51-71	53,592	Feb 29, 1988	Drinking-Fountain Type Hand Pump and Slab
51-72	41,065	Feb 29, 1988	Spigot Type Hand Pump and Slab
51-73	51,879	Feb 29, 1988	Well Head Detail
51-74	48,654	Feb 29, 1988	Well Head Detail with Bleeder Valve
51-75	4,376	Feb 29, 1988	Sanitary Well Seal Tappings
51-75A	18,954	Feb 29, 1988	Sanitary Well Seal
51-76	21,211	Feb 29, 1988	Water Level Gauge
51-77	7,391	Feb 29, 1988	Pressure Gauge
51-78	27,040	Feb 29, 1988	Dry Well (For Hand Pumps Only!)
51-79	17,536	Feb 29, 1988	Cooling Sleeve
51-81	13,177	Feb 29, 1988	Secondary Pow Cond & Control Cable Trench
51-82	13,698	Feb 29, 1988	Secondary Power Conductors Trench
51-83	13,639	Feb 29, 1988	Control Cable Trench
51-84	13,643	Feb 29, 1988	Telephone Cable Trench
51-85	15,160	Feb 29, 1988	Waterline & Secondary Power Conductors Tren
51-86	12,974	Feb 29, 1988	Power Conductors & Telephone Cable Trench
51-87	14,226	Feb 29, 1988	Two Power Cond & Telephone Cable Trench
51-90	13,803	Feb 29, 1988	Drainfield-Level Ground-Parallel Distrib
51-91	9,272	Feb 29, 1988	Sewer Line X-Section
51-92	13,613	Feb 29, 1988	Effluent Line X-Section
51-93	33,746	Feb 29, 1988	Effluent Line Grading Section
51-94	27,038	Feb 29, 1988	Sewer Line Drop Section
51-95	11,903	Feb 29, 1988	Drainfield-Sloping Ground-Serial Distrib
51-100	45,267	Feb 29, 1988	Mobile Home Utility Plan
51-101	9,847	Feb 29, 1988	Utility Pole Elevation
51-102	13,253	Feb 29, 1988	Electrical Service Pole
51-103	5,130	Feb 29, 1988	Sewer Exit Range "C"
51-104	6,048	Feb 29, 1988	Sewer Exit Range "B"
51-105	7,044	Feb 29, 1988	Sewer Exit Range "A"
51-110	107,366	MAR 29, 1988	Ind.Unit Waste Water sump-Std.Absorb. Field
51-111	18,994	MAR 28, 1988	Ind.Unit Waste Water Sump-Std.Absorb. Field
51-112	61,440	MAR 28, 1988	Waste Water Holding Tank-Option C-1(Section
51-113	57,785	MAR 28, 1988	Waste Water Holding Tank-Option C-2(Section
51-114	46,027	MAR 28, 1988	Waste Water Sump With Con.To Col.Sys.(Opt.D
51-115	7,440	MAR 28, 1988	Fiberglass Cone
51-116	4,993	MAR 28, 1988	Tnc. Corner Detail
51-117	6,212	MAR 28, 1988	Plan Of Cone
51-118	14,601	MAR 28, 1988	Grease trap
51-119	13,479	MAR 28, 1988	Cover Detail
51-120	19,592	MAR 28, 1988	Seepage Pit
51-121	12,288	MAR 28, 1988	Rim Detail
51-122	21,846	MAR 28, 1988	Drain-Field Details
51-123	13,786	MAR 28, 1988	Wood Crib Option
51-124	20,855	MAR 28, 1988	Natural Stone Option
51-125	26,420	MAR 28, 1988	Jumbo Brick Option
51-126	24,018	MAR 28, 1988	Waste Water Sump
51-127	39,950	MAR 28, 1988	Waste Water Sump & Hydrant

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NAME	BYTES	DATE	DESCRIPTION
C0000100	226494	MAR 30, 1988	Duplex Sewage Pump Station
C0000500	187812	Mar 01, 1988	Well, Mechanical & Transclosure Details
C0000601	150447	Mar 01, 1988	Well, Mechanical & Transclosure Details
C0000700	81043	Mar 08, 1987	Well & House Mech Details (Subm Pump)
C0000701	175433	Mar 03, 1988	Well & House Mech Details (Subm Pump)
C0000800	150978	Mar 01, 1988	Well & House Mech Details (Jet Pump)
C0000801	89037	Feb 23, 1988	Well & House Mech Details (Jet Pump)
C0000900	128710	MAR 30, 1988	Valve Standard Details Index
C0001000	159463	Mar 01, 1988	Valve & Enc No. 9-11;WL & Appurt No. 21-27
C0001100	146793	Mar 01, 1988	Sewerlines and Appurtenances Nos. 42-47
C0001200	137447	Mar 01, 1988	Sewerlines and Appurtenances Nos. 50-61

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C0001300 252971 Mar 01, 1988 Pumps and Wells Nos 71,72,75-79
C0001400 67520 Mar 01, 1988 Electrical Trench Nos 61-67
C0001500 133651 Mar 01, 1988 WL & Appurtenances Nos.33-34,36-38,41
C0001600 167391 Mar 01, 1988 Waterlines and Appurtenances Nos. 28-32
C0001601 248157 Mar 01, 1988 WL No. 35;SL Nos. 48-50;Well Nos. 73-74
C0001700 128185 Mar 01, 1988 Drainfield Details
C0001900 92505 Mar 01, 1988 Mobile Home Utilities
C0001901 122995 Mar 01, 1988 Mobile Home Utilities
C0002000 496559 SEP 12, 1988 WASTE WATER DISPOSAL UNITS OPTIONS
C0002100 106638 Mar 01, 1988 Campground Waste, Water Sump & Hydrant
C0002101 245906 Mar 01, 1988 Campground Waste Water Sump & Hydrant
C0002200 138679 Mar 03, 1988 PV Sewage Pump Station
C0002300 53496 Mar 01, 1988 Water Tank Foundation Plan
C0002301 74570 Mar 03, 1988 Water Tank Section/Detail
C0002400 306741 SEP 13, 1988 REINFORCED CONCRETE TANK & DETAILS
C0002401 133763 AUG 10, 1988 REINFORCED CONCRETE TANK & DETAILS
C0002500 71419 Mar 01, 1988 Water Tank-50,000 Gal. Concrete
C0002501 22219 Mar 01, 1988 Water Tank-50,000 Gal. Concrete Section
C0002600 149194 Mar 01, 1988 Water Tank Details-Concrete
C0002601 91958 Mar 01, 1988 Water Tank-Std Acc for Concrete Tank
C0002700 60660 Mar 02, 1988 Sewage Lift Station Details and Layout
C0002701 125202 Mar 02, 1988 Sewage Lift Station Section
C0002800 217124 Mar 02, 1988 Duplex Pump Station Electrical Plan
C0002801 146862 Mar 02, 1988 Duplex Pump Station Electrical Details
C0002900 17443 APR 05, 1988 PLAN & PROFILE
C0003000 124141 APR 19, 1988 5 FOOT WOVEN WIRE FENCE
C0003100 121732 APR 19, 1988 6 FOOT CHAIN LINK FENCE
C0003200 118075 APR 19, 1988 GATE ASSEMBLY / DETAILS
C0004000 90684 APR 05, 1988 STD. WATER TANK (10,000 GAL.)
C0004100 98023 APR 05, 1988 STD. WATER TANK (20,000 GAL.)
C0004200 100056 APR 05, 1988 STD. WATER TANK (35,000 GAL.)
C0004300 124422 DEC 18, 1987 STD. WATER TANK (50,000 GAL.)
C0004400 98958 APR 05, 1988 STD. WATER TANK (75,000 GAL.)
C0004500 217521 AUG 05, 1988 STANDARD WATER TANK (CONCRETE)
C0004600 76656 APR 05, 1988 STD. WATER TANK (10.20.35. M GAL.)QUAN.
C0004700 59341 APR 05, 1988 STD. WATER TANK (50.75 M GAL.) QUAN.
C0004800 137301 APR 05, 1988 WATER RESERVOIR PLAN W-5701
CD000001 16789 OCT 02, 1987 SANITARY WELL SEAL
CD000003 21184 OCT 29, 1987 WATER LEVEL GAGE
CD000004 51955 OCT 29, 1987 WELL HEAD DETAIL
CD000005 4771 OCT 29, 1987 SANITARY WELL SEAL TAPPINGS
CD000052 13616 MAR 30, 1988 FIBERGLASS ENCLOSURE ANCHOR BOLT&HOLD DOWN
CD000053 43646 OCT 29, 1987 WELL HEAD DETAIL
CD000054 4323 OCT 29, 1987 SANITARY WELL SEAL TAPPINGS
CD000055 20286 SEP 14, 1987 ELECTRIC MOUNTING CHANNEL DETAIL
CD000154 69945 APR 07, 1988 WELL ENCLOSURE PAD

DRAWINGS IN \STDS\ES FILE

NAME	BYTES	DATE	DESCRIPTION
ES001	1790	Jul 01, 1986	Capillary bulb thermostat
ES002	2176	Jul 01, 1986	GFI
ES003	1463	Jun 17, 1986	Square
ES004	1455	Jun 17, 1986	Rectangle
ES005	4357	Jan 28, 1987	External fire alarm contact
ES006	5969	Jul 02, 1986	2-pole limit switch
ES007	1727	Jun 17, 1986	Test point
ES008	1761	Jun 17, 1986	Jumper terminal
ES009	1970	Jan 05, 1980	Dot
ES010	3673	Jan 04, 1980	Two wires crossing
ES011	3713	Jan 04, 1980	Two wires not connected
ES012	3413	Jul 02, 1986	Dashed line
ES013	3633	Jan 04, 1980	Solid line
ES014	4841	Jan 04, 1980	Partial dashed line
ES015	4594	Jan 04, 1980	Wire number reference
ES016	3436	Jan 05, 1980	Line number reference
ES017	1865	Jun 17, 1986	Plug
ES018	1537	Jun 17, 1986	Receptacle
ES019	1819	Jun 17, 1986	N.O. relay contact
ES020	1800	Jun 17, 1986	N.C. relay contact
ES021	6793	Nov 17, 1986	N.O. external thermostat
ES022	4553	Jul 02, 1986	N.C. external thermostat
ES023	2786	Jan 04, 1980	N.O. Flow switch
ES024	4855	Jan 05, 1980	N.C. Flow switch

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ES025	4615	Jan 05, 1980 N.O. Float switch
ES026	2430	Jun 17, 1986 N.C. Float switch
ES027	2623	Jun 17, 1986 N.O. Pressure switch
ES028	2623	Jun 17, 1986 N.C. Pressure switch
ES029	4060	Jan 04, 1980 Int. closed, timed open time delay contact
ES030	5119	Jan 04, 1980 Int. open, timed closed time delay contact
ES031	3749	Jan 04, 1980 N.O. internal thermostat
ES032	1956	Jun 17, 1986 N.C. internal thermostat
ES033	1894	Jun 17, 1986 N.O. time closed time delay contact
ES034	1894	Jun 17, 1986 N.C. time open time delay contact
ES035	3687	Jan 04, 1980 N.O. time open time delay contact
ES036	1656	Jan 04, 1980 Two wires connected
ES037	4321	Jan 04, 1980 N.C. time closed time delay contact
ES038	6913	Nov 13, 1986 N.O. switch block contact
ES039	8343	Nov 13, 1986 External N.O. pressure switch
ES040	4393	Jul 02, 1986 4 Position selector switch
ES041	5266	Jan 04, 1980 N.C. pressure switch
ES042	1607	Jun 17, 1986 MCP
ES043	6567	Nov 13, 1986 Circuit breaker, GFI
ES044	1559	Jun 17, 1986 N.C. single switch, 1-pole
ES045	6629	Nov 13, 1986 Cam timer
ES046	1837	Jun 17, 1986 Humidistat, N.O.
ES047	1837	Jun 17, 1986 Humidistat, N.C.
ES048	1329	Jun 17, 1986 Plug receptacle connection
ES049	7164	Nov 13, 1986 Plug receptacle with wires
ES050	3943	Jan 05, 1980 N.O. set point control contact
ES051	3916	Jan 05, 1980 N.O. contactor contact
ES052	1291	Jun 17, 1986 Line with connection point
ES053	4020	Jan 05, 1980 N.C. set point contact
ES054	3953	Jan 05, 1980 N.C. contactor contact
ES055	4922	Jan 04, 1980 Horizontal 4 position selector switch
ES056	8269	Nov 13, 1986 External N.O. high limit thermostat
ES057	8306	Nov 13, 1986 External N.C. defrost thermostat
ES058	7394	Nov 13, 1986 DPST switch
ES059	3774	Jul 02, 1986 3 PST switch
ES060	3734	Jul 02, 1986 2 PDT switch
ES061	3974	May 01, 1987 Single phase motor starter cap. relay
ES062	3952	Jan 04, 1980 I-P converter
ES063	9951	Nov 13, 1986 Computer input coil
ES064	9952	Nov 13, 1986 Computer output contact
ES065	1414	Jun 17, 1986 Fuse
ES066	1527	Jun 17, 1986 2 Terminal device
ES067	3550	Jan 05, 1980 Fuse with terminal block
ES068	1462	Jun 17, 1986 2 Terminal device
ES069	8924	Nov 13, 1986 External alarm horn
ES070	2233	Apr 22, 1987 Lightning protector
ES071	4426	Jan 04, 1980 Fuse terminal block left
ES072	2672	Jun 17, 1986 GFI outlet
ES073	1929	Jun 17, 1986 Telephone jack
ES074	1683	Jun 17, 1986 Single pole circuit breaker
ES075	3815	Jul 02, 1986 2-pole circuit breaker
ES076	3927	Jul 02, 1986 3-pole vertical circuit breaker
ES077	5238	Jan 05, 1980 3 Position test switch right
ES078	4549	Jan 04, 1980 3 Position test switch left
ES079	1715	Jun 17, 1986 N.C. Push button
ES080	1491	Jun 17, 1986 N.O. Push button
ES081	4250	Jul 02, 1986 2 Position selector switch
ES082	3732	Jul 02, 1986 Selector switch contact block
ES083	4338	Jul 02, 1986 Vertical 2 position selector switch
ES084	4688	Jul 02, 1986 Vertical 3 position selector switch
ES085	1761	Jun 17, 1986 N.C. Overload contact
ES086	2542	Jun 17, 1986 2 Winding transformer
ES087	1613	Jun 17, 1986 N.O. Limit switch
ES088	1613	Jun 17, 1986 N.C. Limit switch
ES089	7929	Jan 04, 1980 6 Position rotary selector switch
ES090	1461	Jun 17, 1986 Disconnect switch
ES091	1433	Jun 17, 1986 Meter
ES092	1244	Jun 17, 1986 Plus terminal
ES093	1204	Jun 17, 1986 Negative terminal
ES094	3508	Jan 04, 1980 Overload relay
ES095	1532	Jun 17, 1986 Analog meter
ES096	2240	Jun 17, 1986 Strip chart recorder
ES097	6054	May 14, 1987 Power supply
ES098	1423	Jun 17, 1986 Ground
ES099	1329	Jun 17, 1986 Ground
ES100	2151	Apr 21, 1987 Special outlet
ES101	1719	Jun 17, 1986 Resistor
ES102	1973	Jun 17, 1986 Variable resistor

ES103 2867 Jun 17, 1986 LED
ES104 2931 Jun 17, 1986 Diode
ES105 4c84 Jan 04, 1980 Battery
ES106 8937 Jan 04, 1980 External liquid contact probes
ES107 9459 Jan 04, 1980 RTD
ES108 1840 Mar 01, 1987 Internal panel indicator light
ES109 7731 Jan 04, 1980 External alarm light
ES110 10768 Nov 13, 198c External fluorescent light
ES111 7693 Jan 04, 1980 External coil
ES112 1791 Jul 01, 198c Digital meter
ES113 7187 Jan 04, 1980 Motor starter coil
ES114 7214 Jan 04, 1980 3 Pole relay coil
ES115 7301 Jan 05, 1980 2 Pole time delay coil
ES116 7254 Jan 05, 1980 DC relay coil
ES117 7593 Jan 04, 1980 Phase monitor relay
ES118 8328 Jan 05, 1980 Fan
ES119 3906 Jan 04, 1980 Motor auxillary contact
ES120 8509 Jan 05, 1980 External device
ES121 3669 May 13, 1987 Terminal
ES122 1975 Mar 28, 1988 Terminal wire left
ES123 2259 Jan 04, 1980 Vertical 3 position selector switch
ES124 3635 Jul 02, 198c Vertical 3 pole breaker
ES125 4564 Jan 05, 1980 Main 3 pole door disconnect switch
ES126 242c Jan 28, 1987 3 Pole lightning arrestor
ES127 238c Jan 29, 1987 2 Pole lightning arrestor
ES128 3787 Jan 21, 1987 Left bracket
ES129 1699 Aug 05, 1987 Government-furnished Product
ES130 1699 Aug 05, 1987 Not in contract
ES201 17c2 May 29, 1987 Time Switch
ES202 148c May 29, 1987 Toggle switch-one way
ES203 1524 May 29, 1987 2 pole speed control switch
ES204 1521 May 29, 1987 3 way wall switch
ES205 1522 May 29, 1987 Weather proof switch
ES206 1677 Oct 27, 1987 1 way switch w/pilot light
ES207 1713 Oct 27, 1987 3 way switch w/pilot light
ES208 1522 May 29, 1987 speed control switch
ES209 1522 May 29, 1987 explosion proof switch, 1 way
ES210 1568 May 29, 1987 Overload switch
ES211 1547 May 29, 1987 duplex outlet, 120v
ES212 1e23 May 29, 1987 Weather proof duplex outlet, 120v
ES213 1472 May 29, 1987 Clock hanger receptacle
ES214 1555 May 29, 1987 Weather proof simplex outlet & cover
ES215 1519 May 29, 1987 Simplex outlet, 120v
ES216 3157 May 29, 1987 Split wired duplex outlet, 120v
ES217 1603 May 29, 1987 Special simplex outlet
ES218 1647 May 29, 1987 Special duplex outlet
ES219 1679 May 29, 1987 Floor mount simplex outlet, 120v
ES220 1687 May 29, 1987 Floor mountduplex outlet, 120v
ES221 1691 May 29, 1987 Floor mount special outlet
ES222 1521 May 29, 1987 Thermostat
ES223 148c May 29, 1987 PP-power pole; TF-Telephone pole
ES224 1715 May 29, 1987 Underground secondary conductors
ES225 1715 May 29, 1987 Underground primary conductors
ES226 1551 May 29, 1987 Overhead secondary conductors
ES227 1551 May 29, 1987 Overhead primary conductors
ES228 1739 May 29, 1987 Underground telephone conductors
ES229 1551 May 29, 1987 Overhead telephone conductors
ES230 1783 May 29, 1987 Underground conduit stubout
ES231 1739 May 29, 1987 Underground control cable
ES232 2523 May 29, 1987 Conduit/wiring turned down
ES233 1483 May 29, 1987 conduit/wiring turned up
ES234 163c May 29, 1987 Buried cable/conduit
ES235 1566 May 29, 1987 Home run callout (Panel A, Ckt. #2)
ES236 1621 May 29, 1987 Ellipse-101 room number
ES237 1599 May 29, 1987 Detail number/sheet callout
ES238 1451 May 29, 1987 Govt. furnished property
ES239 144b May 29, 1987 Ground
ES240 180c May 29, 1987 GFI breaker
ES241 1691 May 29, 1987 Ground
ES242 2221 May 29, 1987 Ground rod
ES243 1574 May 29, 1987 Locking breaker
ES244 1e9- May 29, 1987 Indiv Mounted Circuit Breaker & Enclosure
ES245 1595 May 29, 1987 Flush panelboard
ES246 1523 May 29, 1987 Surface panelboard
ES247 1670 May 29, 1987 13.25 X 13.5 rectangle
ES248 1686 May 29, 1987 Disconnect switch
ES249 172b May 29, 1987 Meter & socket
ES250 1629 May 29, 1987 Rectangle - 12"x24"

ES251	1629	May 29, 1987	Rectangle - 10"x12"
ES252	1629	May 29, 1987	Rectangle - 15"x34.5"
ES253	1629	May 29, 1987	Rectangle - 12"x34.5"
ES254	1629	May 29, 1987	Rectangle - 12"x48"
ES255	1629	May 29, 1987	Rectangle - 12"x18"
ES256	1629	May 29, 1987	Square 18"
ES257	1629	May 29, 1987	Rectangle - 18"x30"
ES258	1629	May 29, 1987	Square 24"
ES259	1501	May 29, 1987	Circle 15" Dia.
ES260	1501	May 29, 1987	Circle 18" Dia.
ES261	1501	May 29, 1987	Circle 24" Dia.
ES262	1541	May 29, 1987	Circle 15" Dia.
ES263	1501	May 29, 1987	Circle 30" Dia.
ES264	1572	May 29, 1987	Triangle 12" sides
ES265	1572	May 29, 1987	Triangle 15" sides
ES266	1572	May 29, 1987	Triangle 18" sides
ES267	1572	May 29, 1987	Triangle 21" sides
ES268	1681	May 29, 1987	Fluorescent light - 4.5" x 48" strip lumina
ES269	1684	May 29, 1987	Fluorescent light - 12" x 48"
ES270	1683	May 29, 1987	Fluorescent light - 24" x 48"
ES271	1683	May 29, 1987	Fluorescent light - 48" square
ES272	1763	May 29, 1987	Fluorescent light - 9" x 48"
ES273	1683	May 29, 1987	Fluorescent light - 9" x 48" vandal-proof
ES274	1683	May 29, 1987	Fluorescent light - 7.5" x 48" wet location
ES275	1680	May 29, 1987	Fluorescent light - 10" x 96" grow light
ES276	1680	May 29, 1987	Fluorescent light - circline, ceiling mount
ES277	1800	May 29, 1987	Fluorescent light - circline, wall mount
ES278	2013	May 29, 1987	Photoelectric control (photocell)
ES279	1693	May 29, 1987	Alarm horn
ES280	1970	May 29, 1987	Wall/pole mount E-50 revolving alarm light
ES281	1635	May 29, 1987	Fire strobe light - wall/pole mount
ES282	1635	May 29, 1987	Fire alarm light - red - wall mount
ES283	1803	May 29, 1987	Incadescent light - wall mount
ES284	1683	May 29, 1987	Incadescent light - ceiling mount
ES285	2027	Jun 02, 1987	Flood light - 2 bulbs
ES286	1795	Jun 02, 1987	Flood light - 1 bulb
ES287	1805	May 29, 1987	Metal halide light - wall mount
ES288	1685	May 29, 1987	Metal halide light - ceiling mount
ES289	1807	May 29, 1987	High pressure sodium light - wall/pole moun
ES290	1687	May 29, 1987	High pressure sodium light - ceiling mount
ES291	1571	May 29, 1987	Telephone jack (interconnecting)
ES292	1643	May 29, 1987	Telephone jack - wall mount
ES293	1922	May 29, 1987	Telephone jack - floor mount
ES294	1603	May 29, 1987	Exit light - ceiling mount
ES295	1727	May 29, 1987	Exit light - wall mount
ES296	1715	May 29, 1987	Exit light - directional
ES297	2555	May 29, 1987	Incadescent emergency light, battery operat
ES298	1924	May 29, 1987	Step light - incadescent
ES299	1963	Jun 03, 1987	Exit/remote emerg. light -line volt. & bat.
ES300	1757	May 29, 1987	F - Fire bell, T - Trouble
ES301	1642	May 29, 1987	Buzzer (fire)
ES302	1806	May 29, 1987	Alarm horn (fire)
ES303	1897	May 29, 1987	Smoke detector - fixture type
ES304	1606	May 29, 1987	Duct smoke detector
ES305	1606	May 29, 1987	Flame detector
ES306	1686	May 29, 1987	Heat detector (fixed)
ES307	1686	May 29, 1987	Heat detector (combination)
ES308	1606	May 29, 1987	Speaker (fire)
ES309	1670	May 29, 1987	Square - 12"
ES310	2014	May 29, 1987	Exhaust fan
ES311	2142	May 29, 1987	Exhaust fan
ES312	2046	May 29, 1987	Ceiling heater, vent & light
ES313	1965	May 29, 1987	Infra-red radiant heater & vent fan
ES314	2004	May 29, 1987	Unit heater
ES315	1520	May 29, 1987	Water heater
ES316	1493	May 29, 1987	Heat pump #___
ES317	1493	May 29, 1987	Air handler #___
ES318	1493	May 29, 1987	Air conditioner #___
ES319	1469	May 29, 1987	Circuit breaker #___
ES320	1423	May 29, 1987	control panel
ES321	1493	May 29, 1987	High limit unit cooler defrost heater #___
ES322	1469	May 29, 1987	Unit cooler #___
ES323	1469	May 29, 1987	Chiller #___
ES324	1497	May 29, 1987	Unit cooler defrost fan delay thermostat #_
ES325	1612	May 29, 1987	RTD-1 #___, MD-1 #___
ES326	3540	May 29, 1987	Relative humidity sensor RH-1
ES327	1844	May 29, 1987	Humidistat #___
ES328	1911	May 29, 1987	Temperature activated switch (thermostat)

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ES329	1878	May 29, 1987	Temperature activated switch - N.C. #___
ES330	1878	May 29, 1987	Temperature activated switch - N.O. #___
ES331	1648	May 29, 1987	Motor starter
ES332	2048	May 29, 1987	Closed circuit TV camera #___
ES333	1593	May 29, 1987	Outlet - GFI
ES334	2135	May 29, 1987	A.C. plug
ES335	1699	Aug 05, 1987	Government-furnished property
ES336	2287	Aug 05, 1987	Antenna
ES337	1699	Aug 05, 1987	Not in contract
ES500	13035	Feb 23, 1988	Master symbol sheet, SL501-SL551
ES501	9279	Feb 23, 1988	3 Phase motor amb. bmi. temp. comp.
ES502	16049	Feb 23, 1988	1 Phase cap. starter amb. bmi.temp. comp.
ES503	10293	Feb 23, 1988	3 Phase submersible sewage pump
ES504	8978	Feb 23, 1988	1 Phase motor melting alloy
ES505	7055	Aug 21, 1987	Alternator relay
ES506	7246	Aug 21, 1987	One shot/off delay/on delay/time delay rela
ES507	8342	Aug 21, 1987	3 pole time delay & general purpose relay
ES508	4595	Aug 21, 1987	Over/under voltage monitor relay
ES509	6184	Aug 21, 1987	Amplifier relay
ES510	21585	Aug 06, 1987	Telephone dialer

DRAWINGS IN \MECH-DWG FILE

NAME	BYTES	DATE	DESCRIPTION
M0000400	140674	MAY 11, 1987	PROSPECT TC PLAN & LEDGEND
M0000401	107027	May 11, 1987	PROSPECT TC DETAILS
M0000500	153184	Feb 26, 1988	PROSPECT TREE COOLER, REFRIGERATION DETAILS
M0000502	15478	Mar 28, 1988	GLYCOL PIPING FIT DETAIL
M0000503	10452	Mar 28, 1988	CEILING DOOR DETAIL
M0000504	102400	Mar 28, 1988	MECHANICAL MEZZANINE DETAIL
M0000505	24578	Mar 28, 1988	EXHUST AIR SYSTEM DETAILS
M0000506	153584	Mar 28, 1988	REFRIGERATION PIPING SCHEMATIC
M0000600	222239	Feb 26, 1988	FOOTING SLEEVE DETAIL
M0000601	94255	Feb 26, 1988	PROSPECT TREE COOLER, MECH.ROOM PIPING
M0000602	13782	Mar 28, 1988	ROUND-DUCT HANGER DETAILS
M0000603	13544	Mar 28, 1988	FOOTING SLEEVE DETAIL
M0000604	64813	Mar 28, 1988	MECH. MEZZANINE SECTION ,A
M0000605	18547	Mar 28, 1988	SECTION, E
M0000606	64194	Mar 28, 1988	SECTION, D
M0000607	66548	Mar 28, 1988	SECTION, C
M0000608	32813	Mar 28, 1988	SECTION, B
M0000609	16384	Mar 28, 1988	UNIT COOLER HANGING DETAIL
M0000610	8183	Mar 28, 1988	MOUNT DETAIL
M0000611	12286	Mar 28, 1988	DUCT CAP SECTION DETAIL
M0000612	19837	Mar 28, 1988	
M0000700	64888	Feb 24, 1988	MISC. MOUNTING DETAILS
M0000701	43234	Feb 26, 1988	MISC. MOUNTING DETAILS & TABLES
M0000702	12887	Mar 28, 1988	ROD DETAILS
M0000703	19445	Mar 28, 1988	PIPE ANCHOR THRU WALL OR CEILING DETAIL,A
M0000704	22904	Mar 29, 1988	PIPE ANCHOR DETAIL, B
M0000705	16718	Mar 29, 1988	TYPE, C
M0000706	6559	Mar 29, 1988	TYPE, A
M0000707	10161	Mar 29, 1988	TYPE, E
M0000708	15230	Mar 29, 1988	VERTICAL DUCT SUPPORT
M0000800	97589	Feb 26, 1988	MISC. PIPING DETAILS
M0000801	81431	Feb 26, 1988	MISC. PIPING DETAILS
M0000802	11946	Mar 29, 1988	TYPE, I
M0000803	13864	Mar 29, 1988	TYPE, III
M0000804	10892	Mar 29, 1988	TYPE, C
M0000805	10673	Mar 29, 1988	TYPE, D
M0000806	10719	Mar 29, 1988	TYPE, II
M0000807	19799	Mar 29, 1988	TYPE, E FOR WALLS
M0000808	11212	Mar 29, 1988	DUCT UNDER SLAB, C
M0000809	13266	Mar 29, 1988	DUCT PENETRATION, D
M0000810	15039	Mar 29, 1988	VENT STACK THRU ROOF
M0000811	12040	Mar 29, 1988	ICE SUMP DETAIL
M0000812	13709	Mar 29, 1988	TYPE, IV
M0000900	110695	Mar 29, 1988	MISC. PIPING DETAILS
M0000901	158258	Mar 29, 1988	MISC. PIPING DETAILS
M0001000	89144	Mar 29, 1988	BELT & DIRECT UNITS
M0001001	78491	Mar 29, 1988	MISC. DUCT PIPE DETAILS
M0001002	156851	Mar 29, 1988	MISC. DETAILS
M0001003	91849	Mar 29, 1988	MISC. DETAILS
M0001100	116840	MAR 29, 1988	90 DEG TEES & LATERALS MISC. DETAILS

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M0001101 75942 Mar 29, 1988 MISC. DETAILS
M0001102 128648 Mar 29, 1988 MISC. DETAILS
M0003000 47873 JAN 29, 1987 MAIN. BLDG. MEDFORD TN.PLUMBING& AIR PIPING
M0003100 90762 FEB 05, 1987 MAIN. BLDG. MEDFORD TN.DUCTWORK& VEH. EXH.
M0003200 96774 MAR 05, 1987 CHEM. STOR. BLDG. MEDFORD TN. PLANS SECT.
M0003400 79160 MAR 06, 1987 SECTION & SCHEDULES
M0003401 106276 MAR 10, 1987 BOILER ISO. & EQUIP. & DUCT SUPORT FLASHING

DRAWINGS IN \STDS\ARCHDWG FILE

NAME	BYTES	DATE	DESCRIPTION
A0000100	216300	Jan 01, 1980	Gas & Oil Storage Bldg.-Floor Plan
A0000200	185449	Oct 18, 1985	Gas & Oil Storage-Elevations & Sections
A0000300	133509	Oct 16, 1987	Gas & Oil Storage-Details
ABOR-01	24576	MAR 02, 1988	33.6 X 22.6 Border
ABOR-02	24589	Oct 21, 1987	67 X 40 Ft.. Drawing Area
ABOR-04	24590	Oct 21, 1987	133 X 80 Ft.. Drawing Area
ABOR-08	24591	Oct 21, 1987	267 X 163 Ft.. Drawing Area
ABOR-16	24592	Oct 21, 1987	537 X 327 Ft.. Drawing Area
ABOR-OLI	24472	Oct 21, 1987	34 X 23" Border
AB020001	125577	APR 05, 1988	FLOOR PLAN. DETAILS SCEDULES
AB020002	170562	APR 05, 1988	ELEVATIONS SECTIONS & DETAILS
AB020004	98577	APR 05, 1988	2BD. 2STOR. 395 A-6 STD. DUPLEX LOWER-UPER
AB020005	192512	APR 05, 1988	2BD. 2STOR. DUPLEX ELEV. DET.& SEC.
AB020006	107013	APR 05, 1988	MISCELLANEOUS DETAILS
AB020007	173570	APR 05, 1988	HOUSING LAYOUT
AB060002	175196	APR 18, 1988	TILLER TC FOUNDATION. FLOOR PLAN & DETAILS
AB060003	141293	APR 18, 1988	TILLER TC ELEVATIONS & SECTIONS
AB060004	140902	APR 18, 1988	TILLER TC DETAILS
AB060005	74350	APR 19, 1988	TILLER TC DETAILS
AB060006	76829	APR 19, 1988	TILLER TC DETAILS
AB060101	137106	DEC 01, 1987	QUILCINE COOLER-STORAGE FLOOR PLAN & DETAIL
AB060102	185732	DEC 02, 1987	QUILCINE COOLER-STORAGE ELEV. & SECTIO
AB060107	140187	DEC 01, 1987	QUILCINE COOLER-STORAGE MISS. DETAILS
AB060104	82842	DEC 01, 1987	QUILCINE COOLER-STORAGE DETAIL SHEET
AB060202	172972	APR 19, 1988	MCKENZIE TC FOUNDATION.FLOOR PLAN.SCHEDULES
AB060203	127841	APR 19, 1988	MCKENZIE TC ELEVATION & SECTIONS
AB060204	117779	APR 19, 1988	MCKENZIE TC DETAILS
AB060205	111473	APR 19, 1988	MCKENZIE TC MISCELLANEOUS DETAILS
AB060206	54717	APR 19, 1988	MCKENZIE TC MISCELLANEOUS DETAILS
AB060402	202558	DEC 02, 1987	NO. BEND TC FLOOR PLAN. SCEDULES. DETAILS
AB060403	129432	DEC 01, 1987	NO. BEND TC ELEV. & SECT.
AB060404	179727	DEC 01, 1987	NO. BEND TC MISS. DETAILS
AB060405	50495	NOV 30, 1987	NO. BEND TC MISS. DETAILS
AB090001	213065	APR 13, 1988	8X8 PUMPHOUSE CEMENT BLOCK
AB090101	185017	APR 13, 1988	8X12 PUMPHOUSE WOOD FRAM STEEP PITCH ROOF
AB090201	193166	APR 13, 1988	8X12 PUMPHOUSE WOOD FRAME LOW PITCH ROOF
AB090301	115999	APR 19, 1988	22' X 12' PUMP HOUSE. NORWOOD W.S.
AB090302	103606	APR 19, 1988	22' X 12' PUMP HOUSE DETAILS NORWOOD W.S.
AS110601	213926	APR 13, 1988	CONFORT STATION GOLD BEACH 1 OF 2
AS110602	228467	APR 13, 1988	CONFORT STATION GOLD BEACH 2 OF 2
E0084000	71858	SEP 03, 1986	STD. 3 BDR. RES. RAGER RES. POWER & LIGHTIN
E0084100	121666	SEP 11, 1986	2 BDR 2 STORY STD. DUPLEX POWER & LIGHTING
E0084200	85530	APR 05, 1988	RAGER RESIDENCES PANEL SCHED. & DETAILS

DRAWINGS IN \STDS\SL FILE

NAME	BYTES	DATE	DESCRIPTION
SL500	93225	Mar 28, 1988	Master sheet, physical wiring diagram symbo
SL501	4859	MAR 31, 1988	Transformer
SL502	4292	MAR 31, 1988	Transformer
SL503	5104	Jan 04, 1980	Capacitor/starter relay
SL504	3614	MAR 31, 1988	Time clock
SL505	3064	MAR 31, 1988	Telephone dialer
SL506	4925	MAR 31, 1988	Three phase motor starter
SL507	3484	Jan 05, 1980	Omega
SL508	3863	Jan 04, 1980	Resistor
SL509	4381	Jan 04, 1980	Test switch
SL510	3734	Jan 04, 1980	Terminal block
SL511	3808	Jan 04, 1980	Fuse

SL512 3976 Jan 04, 1980 Two test switches
SL513 4334 Jan 05, 1980 Diode
SL514 4363 Jan 05, 1980 Two diodes
SL515 4322 Jan 05, 1980 Four terminal device
SL516 8194 Jan 05, 1980 Time clock
SL517 4e42 Jan 05, 1980 Main buss, 2-pole
SL518 5047 Jan 05, 1980 Main buss, 3-pole
SL519 4486 Jan 05, 1980 Ground buss
SL520 2637 MAR 31, 1988 Neutral buss
SL521 2961 MAR 31, 1988 Lightning arrestor
SL522 2246 MAR 31, 1988 3-pole MCP
SL523 2565 MAR 31, 1988 Main breaker, 2-pole
SL524 3059 MAR 31, 1988 Main breaker, 3-pole
SL525 2275 MAR 31, 1988 GFI
SL526 3313 MAR31, 1988 Thermostat
SL527 3110 MAR 31, 1988 Key
SL528 2199 MAR 31, 1988 Strip Heater
SL529 2589 MAR 31, 1988 Power supply, 1.2 amps
SL530 2587 MAR 31, 1988 Power supply, 7.2 amps
SL531 3220 MAR 31, 1988 Intrinsically safe barrier
SL532 3445 MAR 31, 1988 Phase monitor relay
SL533 8533 MAR 31, 1988 Intrinsically safe barrier schematic
SL534 1861 MAR 31, 1988 Circuit breaker, 1-pole
SL535 2093 MAR 31, 1988 Circuit breaker, 2-pole
SL536 2245 MAR 31, 1988 Circuit breaker, 3-pole
SL537 4436 MAR 31, 1988 RDI 88P relay base for time delay
SL538 37e1 MAR 31, 1988 RDI 88P for VMR
SL539 4364 MAR 31, 1988 RDI 88P relay base for alternator
SL540 49e4 MAR 31, 1988 RDI 113R 3-pole relay base
SL541 5179 MAR 31, 1988 RDI 11BE relay base for DC relay
SL542 2245 MAR 31, 1988 Digital time clock
SL543 4620 MAR 31, 1988 TCAM 5230
SL544 2088 MAR 31, 1988 Operation counter
SL545 2638 MAR 31, 1988 Running time meter
SL546 2071 MAR 31, 1988 Indicator light
SL547 1972 MAR 31, 1988 Sonalert
SL548 2877 MAR 31, 1988 4-52BAM Contact blocks N.O.
SL549 2479 MAR 31, 1988 3-52B4M Contact blocks N.O.
SL550 2321 MAR 31, 1988 2-52BAM Contact blocks N.O.
SL551 2140 MAR 31, 1988 1-52BAM Contact block N.C.

DRAWINGS IN \WASTE FILES

NAME	BYTES	DATE	DESCRIPTION
A0000600?5.?31		FEB 25,1988	Solar Vault Toilet - Standard
A0000e0199.51?		MAR 24,1988	Solar Vault Toilet - Standard - Section
A0000e?2??.e42		MAR 24,1988	Solar Vault Toilet - Standard - Floor
A000007005e.11?		MAR 24,1988	Solar Vault Toilet - Standard - Details
A0000?0158.993		FEB 25,1988	Solar Vault Toilet - Standard - Liner
A0000?0220.888		FEB 25,1988	Solar Vault Toilet - Standard - Details2
A0000800	118609	MAR 08,1987	Wood 1 Unit Vault Toilet
A0000801	125453	MAY 08,1987	Wood 1 Unit Vault Toilet
A0000900	7e2??	JAN 28,1987	Double Vault Handicap Toilet
A000100044.457		MAR 24,1988	Solar Handicap Toilet - Elevations
A0001100192.115		FEB 25,1988	Solar Handicap Toilet - Floor Plan
A0001101112.654		MAR 24,1988	Solar Handicap Toilet - Section
A0001200109.709		FEB 25,1988	Handicap Toilet Liner
A000120143.215		MAR 24,1988	Solar Handicap Toilet - Details
A000120258.986		MAR 24,1988	Solar Handicap Toilet - Details2

DRAWINGS ON LINCOLN DISK #1

NAME	BYTES	DATE	DESCRIPTION
EFXC600C	218305	Oct 21, 1988	ELECTRICAL FIXTURE CUT SHEETS
F13	16533	Oct 19, 1988	CUT SHEET
F14	9848	Oct 19, 1988	CUT SHEET
F15	10582	Oct 19, 1988	CUT SHEET
F3(	5517	Oct 19, 1988	CUT SHEET
F40	43075	Oct 19, 1988	CUT SHEET
F41	44837	Oct 19, 1988	CUT SHEET

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F42        42307 Oct 19, 1988 CUT SHEET
F6         15388 Oct 19, 1988 CUT SHEET

EFXED009  185787 Oct 20, 1988 ELECTRICAL FIXTURE CUT SHEETS
F1          7932 Oct 11, 1988 CUT SHEET
F10        19732 Oct 11, 1988 CUT SHEET
F11         6683 Oct 16, 1988 CUT SHEET
F12         7678 Oct 11, 1988 CUT SHEET
F17         8564 Oct 17, 1988 CUT SHEET
F20        15065 Oct 11, 1988 CUT SHEET
F21        19074 Oct 11, 1988 CUT SHEET
F22        19330 Oct 11, 1988 CUT SHEET
F4          6209 Sep 27, 1988 CUT SHEET
F5          7387 Oct 11, 1988 CUT SHEET
F7          5939 Oct 11, 1988 CUT SHEET
F8         10268 Oct 11, 1988 CUT SHEET

H0000007  71873 Oct 22, 1988 DRAINAGE DIP (TYPE EXCAVATED)
HD000019   6388 Oct 22, 1988 DETAIL
HD000020  26078 Oct 22, 1988 DETAIL
HD000021  27090 Oct 22, 1988 DETAIL

H0000008  33650 Oct 22, 1988 DRAINAGE DIP (TYPE BALANCED)
HD000021  27090 Oct 22, 1988 DETAIL

H0000013  25060 Sep 12, 1988 ROAD STRUCTURAL DETAIL (#2)
HD000025   3160 Sep 12, 1988 DETAIL
HD000026   5110 Sep 12, 1988 DETAIL
HD000027   8295 Sep 12, 1988 DETAIL
HD000028   4111 Sep 12, 1988 DETAIL
HD000029   7694 Sep 12, 1988 DETAIL

H0000015  61625 Oct 26, 1988 ROAD STRUCTURAL DETAIL (OPT 3)
HD000031   5380 Oct 26, 1988 DETAIL
HD000032   5047 Oct 26, 1988 DETAIL
HD000033   4273 Oct 26, 1988 DETAIL
HD000034   2333 Oct 26, 1988 DETAIL
HD000035  21385 Oct 26, 1988 DETAIL
HD000036  16153 Oct 26, 1988 DETAIL
HD000037  13754 Oct 26, 1988 DETAIL
HD000038   5828 Oct 26, 1988 DETAIL

H0000016  67337 Dec 01, 1988 SIX PANEL GATE
HD000039   4595 Dec 01, 1988 DETAIL
HD000040   3506 Dec 01, 1988 DETAIL

H0000020 373050 Oct 22, 1988 DRAINAGE DETAILS
DCC        18154 Sep 13, 1988 DETAIL
HD000014   10857 Sep 13, 1988 DETAIL
HD000015    6700 Sep 13, 1988 DETAIL
HD000016   79390 Sep 13, 1988 DETAIL
HD000017   93296 Sep 13, 1988 DETAIL
HD000024   11601 Sep 13, 1988 DETAIL
RAP       155762 Sep 15, 1988 DETAIL

H0000026  36073 Oct 22, 1988 DRAINAGE CONSTRUCTION DETAILS
HD000008  24068 Oct 22, 1988 DETAIL
HD000009   8274 Oct 21, 1988 DETAIL
HD000010   3599 Oct 22, 1988 DETAIL

H0000027 180326 Oct 22, 1988 DRAINAGE CONSTRUCTION DETAILS
HD000011  27213 Oct 22, 1988 DETAIL
HD000012  29827 Oct 22, 1988 DETAIL
HD000013  37777 Oct 22, 1988 DETAIL

H0000030  34362 Oct 22, 1988 POWDER RIVER GATE
HD000044   4096 Oct 19, 1988 DETAIL

MAP00001 181957 Dec 01, 1988 SITEPLAN/MAP SYMBOLS
MAP00002 128977 Dec 01, 1988 SITEPLAN/MAP SYMBOLS
MAP00003 122886 Dec 01, 1988 PLANIMETRIC FEATURES
MAP00004  52248 Dec 02, 1988 FEATURE SYMBOLS
MAP00005  55939 Dec 02, 1988 FEATURE SYMBOLS
MAP00006 224485 Dec 27, 1988 PLANIMETRIC FEATURES

RED00002 727484 Oct 16, 1988 BARRIERS/FENCES
LDBFe001 41[illegible] Oct 1[illegible], 1988 DETAIL
LDBF6309  15876 Oct 16, 1988 DETAIL
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LDBF6007 127416 Oct 16, 1988 DETAIL
LDBFB003  26187 Oct 16, 1988 DETAIL
LDBF8004  24723 Oct 16, 1988 DETAIL

RED00003 571059 Nov 15, 1988 SINEAGE #1
ELEV      69228 Nov 15, 1988 DETAIL
LDS16001  17985 Nov 15, 1988 DETAIL
LDS16007 193859 Nov 14, 1988 DETAIL
LDS16008 247990 Nov 14, 1988 DETAIL
LDS16022  67847 Aug 09, 1986 DETAIL

RED00004 389682 Sep 08, 1988 SITE DETAILS
LDWA2001  35800 Aug 22, 1988 DETAIL
LDWA2002  89375 Aug 22, 1988 DETAIL
LDWA2003  53065 Aug 22, 1988 DETAIL
LDWA2004  58739 Aug 22, 1988 DETAIL
LDWA2005  23096 Aug 22, 1988 DETAIL
LDWA2006  22444 Aug 22, 1988 DETAIL
LDWA2007  29522 Aug 22, 1988 DETAIL
LDWA2008  61901 Aug 22, 1988 DETAIL
LDWA6009  44456 Oct 24, 1988 DETAIL

RED00005 223793 Nov 17, 1988 CAMPSITE DETAILS
LDBF6006  57045 Nov 17, 1988 DETAIL
LDCS6001  66648 Nov 17, 1988 DETAIL
LDCS6002  34494 Nov 17, 1988 DETAIL
LDTS6001  67248 Nov 17, 1988 DETAIL

RED00008 229410 Aug 23, 1988 TABLES AND BENCHES
LDBE6003  77077 Aug 23, 1988 DETAIL
LDBE8001  40972 Aug 23, 1988 DETAIL
LDBE8002  62446 Aug 23, 1988 DETAIL

RED00009 237675 Sep 08, 1988 CAMP SPURS
LDCS5005  43564 Aug 24, 1988 DETAIL
LDCS5006  44696 Aug 24, 1988 DETAIL
LDCS8003  39047 Aug 24, 1988 DETAIL
LDCSE004  74817 Aug 24, 1988 DETAIL

RED00010 759821 Sep 10, 1988 CAMPSITE FIREPLACES
LDFP5004  56756 Aug 27, 1988 DETAIL
LDFP6001 166652 Aug 26, 1988 DETAIL
LDFP6003  98787 Aug 30, 1988 DETAIL
LDFP6006 135134 Aug 30, 1988 DETAIL
LDFP8002 192695 Aug 31, 1988 DETAIL
LDFP8007 119924 Aug 27, 1988 DETAIL

RED00011 447220 Dec 05, 1988 SINEAGE #2
LDSI3004  26284 Dec 05, 1988 DETAIL
LDS16002 141834 Dec 05, 1988 DETAIL
LDS16003 169066 Dec 02, 1988 DETAIL
LDS16005  53742 Dec 02, 1988 DETAIL
LDS16009  63819 Dec 02, 1986 DETAIL

RED00012 202861 Aug 23, 1988 GATES (WOOD)
LDGA6001 155835 Aug 23, 1988 DETAIL

RED00013 290861 Aug 23, 1988 TABLE DETAILS
LDPT6001  97103 Aug 23, 1988 DETAIL
LDPT6002 193070 Aug 23, 1988 DETAIL

RED00014 526010 Oct 24, 1988 RETAINING WALLS AND WALL SEAT
CA11      63063 Oct 24, 1988 DETAIL
EA11      49873 Oct 24, 1988 DETAIL
FA11      91093 Oct 24, 1988 DETAIL
LDWA6009  44456 Oct 24, 1988 DETAIL
LDWA8010  51534 Oct 24, 1988 DETAIL
VIEWSEC   61044 Oct 24, 1988 DETAIL

RED00016 139822 Oct 25, 1986 REGISTRATION BOX DEDICATION PLAQUE
LDFB4001  46223 Oct 25, 1988 DETAIL
LDFB6001  48642 Oct 25, 1988 DETAIL
LIS16010  18726 Oct 25, 1988 DETAIL

RED00017 423691 Oct 24, 1988 BULLETIN BOARD WITH FEE DEPOSITORY
AFEEDEP   99819 Oct 24, 1988 DETAIL
BRDDR4A  107975 Oct 24, 1986 DETAIL
DDET      26321 Oct 24, 1988 DETAIL
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DSEC       25602 Oct 24, 1988 DETAIL
ECON       19495 Oct 24, 1988 DETAIL
FELEV      31c9a Oct 24, 1988 DETAIL
FSEC       98628 Oct 24, 1988 DETAIL
GBULL      33120 Oct 24, 1988 DETAIL
SIDELN     21495 Oct 24, 1988 DETAIL

REC00021 146503 Oct 18, 1988 CAMP SPURS AND DETAILS
LDCS6003  39433 Oct 18, 1988 DETAIL
LDCS6004  62300 Oct 18, 1988 DETAIL
LDCS6005  17908 Oct 18, 1988 DETAIL
LDCS6006  25299 Oct 18, 1988 DETAIL

REC00022 140518 Nov 03, 1988 FOOTBRIDGES
LDBR6002  11794 Nov 03, 1988 DETAIL
LDBR6003  37811 Nov 03, 1988 DETAIL
LDBR6004   9724 Nov 03, 1988 DETAIL
LDBR6005  10342 Nov 03, 1988 DETAIL
LDBR6006  15414 Nov 03, 1988 DETAIL
LDBR6007  15570 Nov 03, 1988 DETAIL
LDBR6008  15442 Nov 03, 1988 DETAIL
LDBR6009  33845 Nov 03, 1988 DETAIL
LDBP6010  13958 Nov 03, 1988 DETAIL

REC00023 481745 Nov 03, 1988 CURB, SIDEWALK RAMP, BNCH.LIGHTS,CHNL DRAIN
LDBE6007  85614 Nov 03, 1988 DETAIL
LDBE6008  22536 Nov 03, 1988 DETAIL
LDCB6001  90956 Nov 03, 1988 DETAIL
LDDR6002  77541 Nov 03, 1988 DETAIL
LDLT6001 137177 Nov 03, 1988 DETAIL
LDRP6001 134804 Nov 03, 1988 DETAIL

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DET2       65127 Nov 04, 1988 DETAIL

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FSCPLNLG	3867	Aug	14,	1988	MAP SYMBOL
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FSHELIPT	3815	Aug	14,	1988	MAP SYMBOL
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RHC2RDPS	4506	Aug	13,	1988	MAP SYMBOL
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DS000130  10049 Jul 08, 1988 MAP SYMBOL
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DS000132   9897 Jul 08, 1988 MAP SYMBOL
DS000133   9854 Jul 08, 1988 MAP SYMBOL
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CS000144	9985	Jul 08, 1988	MAP SYMBOL
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CS000170	3257	Jul 08, 1988	MAP SYMBOL
CS000171	1963	Jul 09, 1988	MAP SYMBOL
CS000172	3341	Jul 08, 1988	MAP SYMBOL
CS000173	1795	Jul 09, 1988	MAP SYMBOL
CS000174	2741	Jul 08, 1988	MAP SYMBOL
CS000175	2737	Jul 08, 1988	MAP SYMBOL
CS000176	2725	Jul 08, 1988	MAP SYMBOL
CS000177	3144	Jul 08, 1988	MAP SYMBOL
CS000178	3902	Jul 08, 1988	MAP SYMBOL
CS000179	2900	Jul 08, 1988	MAP SYMBOL
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CS000187	8079	Jul 08, 1988	MAP SYMBOL
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CS000191	4595	Jul 08, 1988	MAP SYMBOL
CS000192	4864	Jul 08, 1988	MAP SYMBOL
CS000193	4826	Jul 08, 1988	MAP SYMBOL

DRAWINGS ON LINCOLN DISK #2

NAME	BYTES	DATE	DESCRIPTION
EFXCS001	457819	Dec 28, 1988	ELECTRICAL FIXTURE CUT SHEET 1 OF 10
E-20	7039	Dec 28, 1988	CUT SHEET DETAIL
E-21	10493	Dec 28, 1988	CUT SHEET DETAIL
E-22	17402	Dec 28, 1988	CUT SHEET DETAIL
E-24	6292	Dec 28, 1988	CUT SHEET DETAIL
E-25	316921	Dec 28, 1988	CUT SHEET DETAIL
E-26	6473	Dec 28, 1988	CUT SHEET DETAIL
E-27	10931	Dec 28, 1988	CUT SHEET DETAIL
E-30	6233	Dec 28, 1988	CUT SHEET DETAIL
E-31	23302	Dec 28, 1988	CUT SHEET DETAIL
E-32	16898	Dec 28, 1988	CUT SHEET DETAIL
E-33	12434	Dec 28, 1988	CUT SHEET DETAIL
E-34	10571	Dec 28, 1988	CUT SHEET DETAIL
E-35	12237	Dec 28, 1988	CUT SHEET DETAIL
MPS-14	15886	Dec 28, 1988	CUT SHEET DETAIL
I-25	12798	Dec 28, 1988	CUT SHEET DETAIL
I-31	7209	Dec 28, 1988	CUT SHEET DETAIL
I-45	9041	Dec 28, 1988	CUT SHEET DETAIL
EFXCS002	262556	Dec. 29, 1988	ELECTRICAL FIXTURE CUT SHEET 2 OF 10

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E23 22150 Nov 10, 1988 CUT SHEET DETAIL
E37 7597 Nov 10, 1988 CUT SHEET DETAIL
F29 15273 Nov 10, 1988 CUT SHEET DETAIL
F51 38099 Nov 10, 1988 CUT SHEET DETAIL
F52 37973 Nov 10, 1988 CUT SHEET DETAIL
F53 37941 Nov 10, 1988 CUT SHEET DETAIL
F55 38154 Nov 10, 1988 CUT SHEET DETAIL
F56 37959 Nov 10, 1988 CUT SHEET DETAIL
I18 3855 Nov 10, 1988 CUT SHEET DETAIL
I20 7755 Nov 10, 1988 CUT SHEET DETAIL
I22 25904 Nov 10, 1988 CUT SHEET DETAIL

EFXCS004 176255 Nov 29, 1988 ELECTRICAL FIXTURE CUT SHEET 4 OF 10
14151617 4473 Nov 02, 1988 CUT SHEET DETAIL
HF315 21172 Nov 02, 1988 CUT SHEET DETAIL
HF321 20225 Nov 02, 1988 CUT SHEET DETAIL
HF56 13250 Nov 02, 1988 CUT SHEET DETAIL
I13 12505 Nov 02, 1988 CUT SHEET DETAIL
I23 11018 Nov 02, 1988 CUT SHEET DETAIL
I24 2582 Oct 29, 1988 CUT SHEET DETAIL
I26 4779 Nov 02, 1988 CUT SHEET DETAIL
I36 17191 Nov 02, 1988 CUT SHEET DETAIL
I37 24243 Nov 02, 1988 CUT SHEET DETAIL
I50 5693 Nov 02, 1988 CUT SHEET DETAIL
I8 8374 Nov 02, 1988 CUT SHEET DETAIL
I9-110 16411 Nov 02, 1988 CUT SHEET DETAIL
MH10 16460 Nov 02, 1988 CUT SHEET DETAIL
T61 15785 Nov 02, 1988 CUT SHEET DETAIL

EFXCS005 14c709 Nov 10, 1988 ELECTRICAL FIXTURE CUT SHEET 5 OF 10
E40 15c93 Nov 05, 1988 CUT SHEET DETAIL
F24 12286 Nov 05, 1988 CUT SHEET DETAIL
F25 11904 Nov 05, 1988 CUT SHEET DETAIL
F26 11931 Nov 05, 1988 CUT SHEET DETAIL
F27 11930 Nov 05, 1988 CUT SHEET DETAIL
H6 13504 Nov 05, 1988 CUT SHEET DETAIL
HF35 13574 Nov 02, 1988 CUT SHEET DETAIL
HF37 21062 Nov 02, 1988 CUT SHEET DETAIL
HF38 12695 Nov 05, 1988 CUT SHEET DETAIL
I11 5619 Nov 02, 1988 CUT SHEET DETAIL
I33 4907 Nov 05, 1988 CUT SHEET DETAIL
I34 8473 Nov 05, 1988 CUT SHEET DETAIL
I35 15724 Nov 02, 1988 CUT SHEET DETAIL

EFXCS006 213356 Dec 02, 1988 ELECTRICAL FIXTURE CUT SHEET 6 OF 10
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HF52 13107 Nov 29, 1988 CUT SHEET DETAIL
HF53 3826 Nov 27, 1988 CUT SHEET DETAIL
HF54 5150 Nov 27, 1988 CUT SHEET DETAIL
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I28 5617 Nov 23, 1988 CUT SHEET DETAIL
I32 5152 Nov 27, 1988 CUT SHEET DETAIL
I40 11531 Nov 27, 1988 CUT SHEET DETAIL
I6 12330 Nov 27, 1988 CUT SHEET DETAIL

EFXCS007 92097 Nov 21, 1988 ELECTRICAL FIXTURE CUT SHEET 7 OF 10
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E45A 7036 Nov 21, 1988 CUT SHEET DETAIL
E46 7035 Nov 21, 1988 CUT SHEET DETAIL
E47 9031 Nov 21, 1988 CUT SHEET DETAIL
E56 6a16 Nov 21, 1988 CUT SHEET DETAIL
F50 6254 Nov 16, 1988 CUT SHEET DETAIL
FD2 9103 Nov 21, 1988 CUT SHEET DETAIL
FD3 7380 Nov 21, 1988 CUT SHEET DETAIL
HF320 5347 Nov 16, 1988 CUT SHEET DETAIL
I1 3912 Nov 21, 1988 CUT SHEET DETAIL
I21 7287 Nov 16, 1988 CUT SHEET DETAIL
I345 4484 Nov 21, 1988 CUT SHEET DETAIL
MH2 5521 Nov 21, 1988 CUT SHEET DETAIL
MH4 4901 Nov 16, 1988 CUT SHEET DETAIL
T62 15783 Nov 16, 1988 CUT SHEET DETAIL

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EFXDS008 287395 Dec 28, 1988 ELECTRICAL FIXTURE CUT SHEET 8 OF 10
341       22950 Dec 28, 1988 CUT SHEET DETAIL
E39        9879 Dec 28, 1988 CUT SHEET DETAIL
E42        7431 Dec 28, 1988 CUT SHEET DETAIL
E43       12493 Dec 28, 1988 CUT SHEET DETAIL
E46        7103 Dec 28, 1988 CUT SHEET DETAIL
E49        6100 Dec 28, 1988 CUT SHEET DETAIL
E50       16752 Dec 28, 1988 CUT SHEET DETAIL
E55       23032 Dec 28, 1988 CUT SHEET DETAIL
E61       14497 Dec 28, 1988 CUT SHEET DETAIL
FD1       19035 Dec 28, 1988 CUT SHEET DETAIL
G1         9907 Dec 28, 1988 CUT SHEET DETAIL
G2        22036 Dec 28, 1988 CUT SHEET DETAIL
H8        13218 Dec 28, 1988 CUT SHEET DETAIL
H9        14585 Dec 28, 1988 CUT SHEET DETAIL
HPS12     30490 Dec 28, 1988 CUT SHEET DETAIL
HPS122    65596 Dec 28, 1988 CUT SHEET DETAIL
HPS13     64562 Dec 28, 1988 CUT SHEET DETAIL
I12        8096 Dec 28, 1988 CUT SHEET DETAIL
I27       24157 Dec 28, 1988 CUT SHEET DETAIL
MH1        7810 Dec 28, 1988 CUT SHEET DETAIL

EFXDS010  29672 Nov 29, 1988 ELECTRICAL FIXTURE CUT SHEET 10 OF 10
F1B        8282 Nov 10, 1988 CUT SHEET DETAIL
F2         9226 Nov 10, 1988 CUT SHEET DETAIL
F3         9737 Nov 10, 1988 CUT SHEET DETAIL
F9         8520 Nov 10, 1988 CUT SHEET DETAIL

REC00001 242109 Nov 24, 1988 BULLETIN BOARDS
A2        18271 Nov 24, 1988 DETAILS
B2        18424 Nov 24, 1988 DETAILS
LDS1600b 170245 Nov 24, 1988 DETAILS
LDS160x8  93836 Jul 26, 1988 DETAILS
LDS160YY  15174 Aug 02, 1988 DETAILS

REC00015 279404 Sep 08, 1988 BARRIER, BRIDGE, AND GATE DETAILS
LDBF6001 410607 Oct 16, 1988 DETAILS
LDBB3001  41262 Aug 23, 1988 DETAILS
LDGA6002 158597 Aug 23, 1988 DETAILS

REC00020 279687 Nov 22, 1988 FOOTBRIDGE
LDBB6001 276707 Oct 07, 1988 DETAILS

REC00025 395594 Nov 29, 1988 DRAIN GRATES, STEPS, AND BENCHES
LDBE6004  79374 Nov 10, 1988 DETAILS
LDBE6005  64657 Nov 10, 1988 DETAILS
LDBE6006  77202 Nov 10, 1988 DETAILS
LDJR6003 129722 Nov 09, 1988 DETAILS
LDST6005  81354 Nov 10, 1988 DETAILS

H0000001 460205 Nov 17, 1988 TITLE SHEET
H0000003   5057 Oct 25, 1988 ESTIMATE OF QUANTITY SHEET
H0000005 342890 Oct 22, 1988 TIRE ERERADE DISSIPAPTER
H0000009   8984 Oct 19, 1988 BAR GRAPH
H0000010   3719 Oct 19, 1988 PROJECT WORK LIST
H0000011   8188 Sep 09, 1988 PLAN AND PROFILE
H0000012  27269 Sep 10, 1988 ROAD STRUCTURAL DETAIL (#1)
H0000014  20229 Sep 10, 1988 ROAD STRUCTURAL DETAIL (OPT 2)
H0000021 338279 Sep 10, 1988 HIGHWAY RECREATION TRAILS SIGNS
H0000023  67090 Oct 25, 1988 ROAD CLOSURE GATE (OPT 2)
H0000024 107484 Oct 22, 1988 ROAD STRUCTURAL DETAILS (OPT 4)
H0000025 274122 Dec 01, 1988 CLEARING DETAILS
H0000028 262186 Oct 19, 1988 BARRIER RAIL TYPE GATE
H000003I  20746 Oct 19, 1988 POWDER RIVER GATE
INVERTED 451398 Sep 13, 1988 LOGO OF SOME KIND

LDCB6003  39433 Oct 18, 1988 DETAIL
LDCB6004  62300 Oct 18, 1988 DETAIL
LDCB6005  17908 Oct 18, 1988 DETAIL
LDCB6006  25299 Oct 18, 1988 DETAIL
LDST5002  30970 Sep 11, 1988 DETAIL
LDST6001  17004 Sep 11, 1988 DETAIL
LDST6003  38178 Sep 11, 1988 DETAIL
LDST6004  41367 Sep 11, 1988 DETAIL
LDTR4001 146601 Sep 11, 1988 DETAIL

LM000001 410034 Sep 13, 1988 LOGO
REC0000e 626496 Sep 11, 1988 PATHS AND STEPS
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CADINDEX

REC00018 225350 Oct 25, 1988 BULLETIN BOARD
REC00019 134813 Oct 03, 1988 BULLETIN BOARD DETAILS

HOW TO UP/DOWN LOAD TEXT AND BINARY FILES FROM MICROCOMPUTERS TO DG

USING CEO CONNECT VER 3.10

SUMMARY

This document is a summary of file transfer processes for moving text, and binary files from a Microcomputer to the Data General CEO and CLI file space.

Also included are detailed RIS instructions, and physical installation procedures of CEO Connect and also software installation of this program.

This process along with the RIS (Remote Information System) and CEO mail process to retrieve files from a remote Data General host computer to your system will allow sharing any file generated on a Microcomputer (PC) and other DG systems and other users PC's. Any file created on a PC can be uploaded to the DG and RIS'ed to a remote host DG system and downloaded to a Microcomputer for use.

CEO documents can be exported to CLI space and RIS'ed as can binary files.

You can upload your CAD drawings to your CLI space and other users on any DG system which you give your file location and remote RIS access can access your drawings, and other files, if you choose to have others access your files. No one can access your files in CLI unless you provide the complete pathname where your files are and the filename. This allows you to control acess to your files.

There are two types of files generally up/downloaded from a Microcomputer to the Data General. This document describes **TEXT and BINARY** file up / downloading procedures and what they do.

The method of up/downloading from a Microcomputer to the DG is the program run on the Microcomputer, **CEO Connect Version 3.0** or higher. 3.1 is the latest version.

R6 CAD STANDARDS

The R6 Facilities Group will have a library of over 1000 Autocad drawings master LOTUS123 cost estimation templates for facilities, Architectural, Electrical, Mechanical which will be available for RIS'ing to your system for downloading to Autocad for project drawings, cost estimating and design programs.

We also have LOTUS 123 templates for the following electrical engineering applications; short circuit fault calculations, power panel load calculations and balancing, lighting design for interior lighting. These templates will do design calculations and print out design tables and panels which can directly be imported into Autocad drawings as blocks, to eliminate drawings these items and entering text.

These files will be available for RIS'ing from our CLI space at the following location: **R06C:STAFF:ENG:AUTOCAD:FOLDER1:FILENAME.EXT** where filename.ext is the name of the file to be retrived.

The R6 Autocad library will have a file called **CADINDEX** which will list all the drawing files in our library. You can RIS this text file at the location above, import it into CEO or use type CADINDEX in CLI command to view it, and view the filename, size, creation date, and a description of the drawing. New files will be added constantly and will be added to the index to allow you to access new updates as soon as they are available.

MICROCOMPUTER SERIAL CONNECTION AND CEO CONNECT REQUIRED TO TRANSFER FILES

In order to do these file transfers your Microcomputer must be wired to the DG with a serial connection with one of the PC's serial ports. The best way to do this is with a direct connection to the DG at 9600 BAUD. This is the fastest rate that CEO Connect supports. Contact your system manager for the details of this connection. A connection description is included in Appendix 1 of this document.

A modem can also be used at 1200 or 2400 BAUD, if your system is equipped with one, but it is very slow for large files. A 100 K byte file will take about 3 minutes at 9600 but will take 30 minutes at 1200 BAUD.

If a seperate hardwired cable drop is not available, then an A-B RS-232 switch box for about $35 will allow any DG terminal cable to be switched between the DG terminal and the PC.

These file transfer procedures are written to help new users decide which procedure to use and examples of how to do it.

TEXT FILES (WORD PROCESSING)

There are many programs that generate files on a Microcomputer that need to be shared with someone on the DG system. Many Microcomputer based programs will generate output files that are text files which can easily be uploaded to the DG and converted into a word processing **WRD** document for editing and mailing or RIS'ing to others. The DG will convert about 9 types of word processing file types from various brands of word processors directly.

If the type you want isnt covered in the conversion table listed below, there is a program called WORD FOR WORD which will convert, (with formatting intact) most all common word processing formats to a format that the DG can convert into its own WRD word processing format.

Conversly a word processing document (**WRD**), data table, DG spread sheet on the DG can be exported to a text document on the PC for inclusion in a word processor or a spreadsheet or any text based program. DG spread sheets need to be saved as a WRD document to do this transfer.

For example a Lotus 123 print file can be uploaded to the DG to include a PC generated spreadsheet in a report with DG generated text, or a DG generated text file can be exported into a program such as Harvard Business Graphics to use with graphics images and be printed with a laser or plotter.

DG text files can be brought directly into an Autocad CAD drawing after downloading the file into your PC, as a block with the COMMAND:(LOAD"LTEXT"), type LTEXT at command prompt and type filename to insert. The CAD program can then be used to draw graphics around the text or be used a table of information.

Any PC based program that will accept TEXT (ASCII) files can use DG generated word processing text downloaded via ceo Connect.

Text files are normally stored in CEO word processing space or exported to CLI space.

The most generic of text files is an ASCII (pure text file, no control characters). This file is just the alphabet and numbers and any other keyboard character. Other non ASCII files usually have control characters such as ^C, ^P, ^T or other funny non text characters. These are generated by most word processors for underlining text, bolding, tabs and other similar functions.

There are two types of file transfer systems in CEO Connect. One is for text files such as ASCII, CEO Word, Wordstar, WordPerfect DCA, IBM, Multimate. This text file transfer system is located in **FILING MENU** on the DG, they are **IMPORT**, and **EXPORT**. These are text files with some control characters for word processing.

If the text only file you want to up/down load is from one of these programs use **EXPORT** or **IMPORT** in the CEO filing menu.

BINARY FILES (CAD DRAWINGS LOTUS 123 FILES)

Binary files including CAD drawings, LOTUS 123 worksheets or any other program or data or graphics file can be up/down loaded to CLI space for storage or mailing or RIS'ing to anyone in the DG network. Word processing documents must be exported into CLI to use this form of up/downloading. Normally WRD documents are exported using the method described above.

These Microcomputer based files wont run in the CLI environment, but they are not changed during the up/down loading process. The only requirement to share these files with other DG users is that they have a PC, CEO Connect and the same program on their system. Every Forest in Region 6 has presently 3 copies of CEO Connect 3.1. Additional copies are available from DG for $65.

HOW TO TRANSFER FILES

TEXT FILE TRANSFER CEO WORD ASCII and OTHERS

EXPORT A TEXT FILE (FROM DG TO PC)

1. Log onto CEO Connect and enter — 3 TERMINAL OPTION
2. Choose from main menu in CEO DG. — 5 FILING_
3. To export a file choose option — 8 EXPORT
4. Choose — 2 WORKSTATION
5. Enter Drawer, Folder, File of Document. (press SHIFT-F2 for INDEX menu)

6. Do you want to lock the document (Y/N) if Y then you cant edit document, if N then it can be edited on DG.

7. Enter MS-DOS pathname where you want to export document on PC's hard disk or floppy or Bernoulli Cartridge.

   Example: C:\doc\filename.ext or A:\filename.ext, D:\doc\filename.ext etc.

   Where filename is the DOS file name you want to store data on PC, must be 8 characters or less alphanumeric, no punctuation and a legal DOS name.

8. Message appears "File is stored as type: WRD
   What is destination document type? CWT Write in 3 letter type.

   CWT means CEO Write is the type, hit shift index (F2) for other file types which are: (Note your personal profile can be set to default to any of the following)

CWT	CEO Write	MTM	Mulitmate document
WSR	Wordstar Document	DCA	IBM DCA Revisable Form
WDP	Word Perfect	DCF	IBM DCA Final Form
MSD	MS-DOS document,	IBM	DISOSS document
DIF	Document Interchange Format		

9. System asks if you want to replace file if it exists? (Y/N) It will overwrite a current file of that name on the PC in same directory as in path. Otherwise type N for no and it will quit if it finds a name the same.

10. Press enter and wait for logon to host. A menu will appear at bottom of screen and it will count down from the number of blocks in the file to 0 when the file is done transfering. After it is done it will return to the EXPORT menu to wait for a new file to be transfered. If you are all done use CRTL-SHIFT-F2 to go to the main menu.

IMPORT A TEXT FILE (FROM PC TO DG)

1. Log onto CEO Connect and enter — 3 TERMINAL OPTION.
2. Choose from main menu in CEO DG. — 5 FILING
3. To IMPORT a file choose option — 7 IMPORT
4. Choose — 2 WORKSTATION

5. Enter MS-DOS pathname where you want to IMPORT document on PC's hard disk or floppy or Bernoulli Cartridge.

   Example: C:\doc\filename.ext or A:\filename.ext or D:\doc\filename.ext

   Where filename is the DOS file name you want to get on the PC, must be 8 characters or less alphanumeric, no punctuation and a legal DOS name.

6. What is source document type? — CWT For CEO Write
   What is destination document type? — WRD Write in 3 letter type.

Usually you will want to store these files as a WRD word processing file on the DG.

WRD means CEO Word is the type, hit shift index (F2) for other file types which are: (Note your personal profile can be set to default to any of the following) MSD is an ASCII pure text file.

CWT	CEO Write	MTM	Mulitmate document
WSR	Wordstar Document	DCA	IBM DCA Revisable Form
WDP	Word Perfect	DCF	IBM DCA Final Form
MSD	MS-DOS document,	IBM	DISOSS document
DIF	Document Interchange Format		

7. System asks if you want to replace file if it exists? (Y/N) It will overwrite a current file of that name on the DG in same directory as in path. Otherwise type N for no and it will quit if it finds a name the same.

8. Enter Drawer, Folder, File name of Document. (Shift Index will give you menu)

9. Press enter and wait for logon to host. a menu will appear at bottom of screen and it will count down from the number of blocks in the file to 0 when the file is done transfering. After it is done it will return to the EXPORT menu to wait for a new file to be transfered. If you are all done use CRTL-SHIFT-F2 to go to the main menu. If more files are to be transfered enter file name and redo last procedures.

BINARY FILE TRANSFER (CAD DRAWINGS, LOTUS 123 SPREADSHEETS, GRAPHICS ETC.)

UPLOAD BINARY FILE FROM PC TO DG

If you have a CAD drawing or LOTUS 123 spreadsheet file or other binary file to UP/DOWN LOAD use **SEND / RECEIVE** in the main CEO Connect menu of the PC.

1. Log onto DG through CEO Connect main screen.

FROM MAIN MENU ON CEO CONNECT

2. PRESS 3 TERMINAL MODE.

3. From main menu in CEO use **IS** function key (or make one) to get into IS or the following manual method. (4-8 below can be done with a function key)

4. PRESS **7** UTILITIES
5. PRESS **6** USER APPLICATIONS
6. PRESS **2** PUBLIC
7. PRESS **1** RUN
8. PRESS **2** IS
9. PRESS **1** STANDARD

YOU ARE NOW IN IS (INFORMATION SYSTEM) CLI FILE SPACE

10. PRESS **1** ACCESS INFORMATION
11. PRESS **2** STAFF (OR OTHER LOCATION OF CLI FILE SPACE)
12. PRESS **ENTER DRAWER NAME** OR SHIFT-F2 FOR INDEX OF DRAWERS
13. PRESS **ENTER FOLDER NAME** OR SHIFT-F2 FOR INDEX OF FOLDERS
14. PRESS **FS** FOR LIST OF FILES IN FOLDER
15. PRESS **SP** CHECKS FOR FILE SPACE AVAILABLE

YOU ARE NOW IN THE FOLDER WHERE YOU WANT TO UPLOAD YOUR BINARY FILE

If you have enough space to upload proceed. **(1000 blocks is 512K bytes of space.)** If you have 1MB of files you need at least 2100 blocks of CLI space.

16. PRESS **CTRL-BREAK** TO EXIT THE TERMINAL OPTION TO THE PC.
17. PRESS **4 SEND A FILE** TO SEND BINARY FILE PC TO DG
18. TYPE **MS-DOS PATHNAME** (C:\DWG\FILENAME.EXT, A:FILENAME.EXT) ETC,
19. ENTER **THIS COMPLETES FILE TRANSER PROCESS.**

A file transfer menu will pop up on the bottom of the screen and the file size will be indicated in blocks. A counter will count down to zero. When it is at zero the file will be transfered. The system will then return to the CEO Connect main menu on the PC.

TO EXIT CLI AND RETURN TO CEO

20. PRESS **3 TERMINAL MODE** SCREEN WILL BE BLANK AT THIS POINT
21. PRESS **CTRL-ENTER** CARRIGE RETURN TO GET TO **IS-CLI)** PROMPT
22. PRESS **FS** FILE STATUS TO SEE FILES IN FOLDER

If you want to contine to transfer files type **CTRL-BREAK** to go to CEO Connect Main menu and continue 17-18 above.

23.	TYPE	**BYE CTRL-ENTER**	EXITS CLI INTO IS
24.	PRESS	**CRTL-SHIFT-F1**	EXITS IS INTO CEO
25.	PRESS	**CTRL-SHIFT-F2**	GOES TO CEO MAIN MENU

This completes the procedure.

MULTIPLE BINARY FILE TRANSFERS

For multiple file transfer (ANY NUMBER OF FILES THAT CAN BE DESCRIBED BY WILDCARD CHARACTERS OR A WHOLE SUBDIRECTORY OF MIXED FILES) to the same folder use the DOS wildcard characters ? and * just as in DOS. Example to transfer all drawing files ending in DWG from the subdirectory C:\dwg, you would type the pathname **C:\DWG*.DWG** when the pathname is typed. This will transfer all your drawing files with a **DWG** entension and any first name in the DWG subdirectory to the DG in the folder you are defaulted into.

To transfer a whole subdirectory of files of any number of files with any names use the folowing pathname: **C:\DWG*.***. This will transfer all files in the **C:\DWG** subdirectory.

You are now at step 16 above if you want to transfer more files choose 4 send a file and continue the process 17-18 above.

DOWNLOAD BINARY FILE FROM DG TO PC

If you have a CAD drawing or LOTUS 123 spreadsheet file or other binary file to DOWN LOAD use **RECEIVE** in the main CEO Connect menu of the PC.

1. Log onto DG through CEO Connect main screen.

FROM MAIN MENU ON CEO CONNECT

2. PRESS 3 TERMINAL MODE.

3. From main menu in CEO use IS function key (or make one) to get into IS or the following manual method. (4-8 below can be done with a function key)

4. PRESS 7 UTILITIES
5. PRESS 6 USER APPLICATIONS
6. PRESS 2 PUBLIC
7. PRESS 1 RUN
8. PRESS 2 IS
9. PRESS 1 STANDARD

YOU ARE NOW IN IS (INFORMATION SYSTEM) CLI FILE SPACE

10 PRESS 1 ACCESS INFORMATION
11 PRESS 2 STAFF (OR OTHER LOCATION OF CLI FILE SPACE)
12. PRESS ENTER DRAWER NAME OR SHIFT-F2 FOR INDEX OF DRAWERS
13 PRESS ENTER FOLDER NAME OR SHIFT-F2 FOR INDEX OF FOLDERS
14. PRESS FS FOR LIST OF FILES IN FOLDER
15. PRESS SP CHECKS FOR FILE SPACE AVAILABLE

YOU ARE NOW IN THE FOLDER WHERE YOU WANT TO DOWNLOAD YOUR BINARY FILE

If you have enough space to download proceed. **(1000 blocks is 512K bytes of space.)** If you have 2100 blocks of CLI files to download, you need at least 1MB of PC diskspace files .

16. PRESS CTRL-BREAK TO EXIT THE TERMINAL OPTION TO THE PC.
17. PRESS 5 RETRIVE A FILE TO RETRIVE BINARY FILE DG TO PC
18. TYPE HOST PATHNAME CLI (FILENAME.EXT)
19. TYPE MS-DOS PATHNAME C:\DWG\FILENAME.EXT ETC.

IF YOU HIT INS KEY YOU CAN INSERT DRIVE AND PATH AS CEO BRINGS DOWN FILENAME TO THIS LINE. MS-DOS PATHNAME MUST BE 8 ALPHANUMERIC CHARACTERS LEGAL FILENAME.
20. ENTER THIS COMPLETES FILE TRANSER PROCESS.

A file transfer menu will pop up on the bottom of the screen and the file size will be indicated in blocks. A counter will count down to zero. When it is at zero the file will be transfered. The system will then return to the CEO Connect main menu on the PC.

TO EXIT CLI AND RETURN TO CEO

21. PRESS 3 TERMINAL MODE SCREEN WILL BE BLANK AT THIS POINT
22. PRESS CTRL-ENTER CARRIGE RETURN TO GET TO IS-CLI) PROMPT
23. PRESS FS FILE STATUS TO SEE FILES IN FOLDER

If you want to contine to transfer files type CTRL-BREAK to go to CEO Connect Main menu and continue 17-18 above.

24. TYPE	BYE CTRL-ENTER	EXITS CLI INTO IS
25. PRESS	CRTL-SHIFT-F1	EXITS IS INTO CEO
26. PRESS	CTRL-SHIFT-F2	GOES TO CEO MAIN MENU

This completes the procedure.

MULTIPLE BINARY FILE TRANSFERS

For multiple file transfer (ANY NUMBER OF FILES THAT CAN BE DESCRIBED BY WILDCARD CHARACTERS OR A WHOLE SUBDIRECTORY OF MIXED FILES) to the same folder use the wildcard characters * and ? just as in DOS. Example to transfer all drawing files ending in DWG from the default CLI subdirectory, you would type the host pathname *.DWG when the pathname is typed. This will transfer all your drawing files with a DWG entension and any first name in the current CLI subdirectory to the PC in the subdirectory you specify in the MS-DOS pathname. The system will append /OVW to the end of the filename. This will overwrite any existing files of the same name. If you dont want these files replaced backspace <--- the /ovw out.

To transfer a whole subdirectory of files of any number of files with any names use the folowing pathname: *.*. This will transfer all files in the Default CLI subdirectory. C???3???.DWG will transfer all drawings that start with C that have 8 characters in the file name and a 3 in the 5th character position out of 8 characters, and that end in DWG.

You are now at step 16 above if you want to transfer more files choose 4 send a file and continue the process 17-19 above.

GENERAL FILE TRANSFER NOTES

If you connect your PC to the DG via a direct connect serial port at 9600 BAUD the file transfer occurs about 28K/minute. In 10 minutes therefore you can transfer a file about 280K in size. If the system is very busy, this will slow the transfer down. If there are no bytes being transfered for a certain time there is a timeout function which will abort the transfer. This happens occasionally, all you can do is backout and start over. If you are transfering binary files, hit ESC key to go back to the terminal mode, and choose either SEND or RECEIVE a file and enter again, the host and MS-DOS names are still there you dont have to reenter them. If you are transfering a text file go to filing and restart the procedure.

FUNCTION KEYS

To save a few keystrokes use the following macros to IMPORT and EXPORT files and access IS CLI filespace. You make them in the command mode F2, USER, CREATE, start from main menu, name function, ESC to start recording keystrokes. NL below is NEWLINE the macro generator types this for you just press the newline key.

IMPORT

MACRO NAME F2 I USED FOR IMPORTING TEXT FILES

To make macro press F2, user, 1 create, name I, 2 starts from main menu, Press ESC to start recording the following keystrokes.

5NL7NLNL PRESS ESC TO STOP RECORDING, PRESS F1 EXECUTE TO COMPLETE.

EXPORT

MACRO NAME F2 E USED FOR EXPORTING TEXT FILES

To make macro press F2, user, 1 create, name E, 2 start from main menu, Press ESC to start recording the folowing keystrokes.

5NL8NLNLNL PRESS ESC TO STOP RECORDING, PRESS F1 EXECUTE TO COMPLETE.

IS

MACRO NAME F2 IS USED TO ACCESS IS INFORMATION SYSTEM FOR CLI FILES

To make macro press F2, USER, 1 create, name IS, 2 start from main menu, Press ESC to start recording the following keystrokes.

7NL6NL2NLNL2NLNL PRESS ESC TO STOP RECORDING, PRESS F1 EXECUTE TO COMPLETE

HOW TO RIS FILES FROM ONE HOST DG TO ANOTHER

RIS'ing files (REMOTE INFORMATION SYSTEM), RIS is the process of having your local DG computer have a remote DG computer send a copy of one or more of its files stored in CLI filespace to your local DG.

These files can be any binary (CAD, LOTUS 123 files) or text files exported from CEO to CLI. Any CLI stored file can be RIS'ed.

This process along with the up/download process described above for binary files SEND/RETRIEVE A FILE from the CEO Connect main menu will allow you to send your PC or DG created files to any other DG system, or for you to request any other system send you a file if you know its location.

To retrive a file from another remote DG you must do the following:

1. You must know the full pathname of the remote host system where the file is stored. This includes host name, staff, staff name, drawer name, folder name, filename.ext. Example file location:

   R06C:STAFF:ENG:AUTOCAD:FOLDER1:AUTOCAD.DWG where autocad.dwg is the name of the file to retrieve.

   The owner of the files will have to give you a list of the files you have access to. Our index of all R6 Autocad files will be placed into a text file called CADINDEX located in the same drawer and folder as the files to be RIS'ed.

   If you upload your files to your CLI space you would have to send a message to the person or mailing list of persons you want to access your files. You must give global or specific person access to those persons you want to RIS your files into their space.

2. The remote system must allow global access. The file owners' system DG space manager assigns this attribute to an entire drawer of files.

3. You must have CLI access and CLI staff drawer space to put the file into when it is retrieved into your DG.

4. If you need to move the file to your PC you must have CEO Connect Ver 3.0 or later installed on your PC and be connected to the local DG via modem or hard wire. See below for connection details. You would do this for CAD drawings or LOTUS 123 worksheets for example.

   You may only need to RIS a remote file or files from one DG to your DG. This can be accomplished from any DG terminal.

   You do not have to have a PC to RIS files. Any local DG terminal or any remote terminal at another location from your home system that will allow you to log onto your local system or using HOME HOME remote access will allow you to RIS files to your home system.

   Once the remote files are RIS'd into your CLI space on your DG you must logon with a PC to the CLI drawer where the files are to be downloaded to your PC if these files are to be used on the PC. At this point you must

use Retrieve a file in the CEO connect main menu to download the file to your PC's hard disk, Bernoulli disk or floppy disk.

DETAILED RIS PROCESSES

1. Logon to the DG with either a DG terminal or a PC via CEO connect.

2. From main menu in CEO use IS function key (or make one) to get into IS or the following manual method. (3-9 below can be done with a function key) See instructions above for details of how to make this function key.

3. PRESS 7 UTILITIES
4. PRESS 6 USER APPLICATIONS
5. PRESS 2 PUBLIC
6. PRESS 1 RUN
7. PRESS 2 IS
8. PRESS 1 STANDARD

YOU ARE NOW IN IS (INFORMATION SYSTEM) CLI FILE SPACE

9. PRESS 3 REMOTE ACCESS
11. PRESS 6 RETRIVAL
12. PRESS 1 RETRIVAL

YOU ARE NOW IN THE RIS MENU FOR REMOTE RETRIEVAL

YOU NEED TO FILL IN THE FOLOWING MENU WHERE BOLDED:

IS RETRIEVAL FACILITY

Location of file to be retrieved
Host Name:**R06C** NAME OF HOST COMPUTER
Level (1.Public, 2.Staff) **2** Staff Name **ENG** LEVEL, PUBLIC OR STAFF
Drawer Name: **Autocad** DRAWER WHERE FOLDER IS
Folder Name: **Folder1** FOLDER CONTAINING FILES
File Name: **AUTOCAD.DWG** NAME OF FILE TO BE RETRIEVED

Location into which to put the file
Level (1.Public, 2.Staff) **2** Staff Name **ENG** SHIFT-F2 FOR INDEX OF NAMES
Drawer Name:**DRAWERNAME** SHIFT-F2 FOR INDEX OF DRAWERS
Folder Name:**FOLDERNAME** SHIFT-F2 FOR INDEX OF FOLDERS
File Name: **AUTOCAD.DWG** FILENAME BROUGHT DOWN AUTOMATICALLY

SHALL I RETRIEVE FILE NOW (Y/N) ENTER Y TO RETRIEVE NOW N TO DO IT LATER

EXECUTE (Y/N)? Y TO EXECUTE ENTER OR F1

This completes RIS procedure, if another file is to be transfered the system defaults to the same locations for host and you local systems, you only have to newline through the menu and change the filename to be retrieved. If you have large files to retrieve wait till after 4:30 and enter the time in the menu if you say no to instant retrieval. This will reduce system impact on telecommunications.

TO LOGOFF IS AND RETURN TO CEO

24. PRESS **CRTL-SHIFT-F1** EXITS IS INTO CEO

25. PRESS **CTRL-SHIFT-F2** GOES TO CEO MAIN MENU

This completes the procedure.

PHYSICAL CONNECTION OF A MICROCOMPUTER TO THE DG BY HARDWIRE

CEO CONNECT CABLE CONNECTIONS

TAKEN FROM CEO CONNECTION VER 3.10 MANUAL

3. Requirements for direct connection and modem users.

The direct connection of the workstation to the host is possible using either RS-232 or RS-422 protocol.

For RS-232, only 3 wires need to run between the workstation and the host, but two groups of pins must be jumpered together at the workstation:

	25-pin	9-pin	Signal
To host:	2	3	TD (Transmit Data)
	3	2	RD (Receive Data)
	7	5	GND (Signal Ground)
Jumper #1:	4	7	RTS (Request to Send)
	5	8	CTS (Clear to Send)
Jumper #2:	6	6	DSR (Data Set Ready)
	8	1	CD (Carrier Detect)
	20	4	DTR (Data Terminal Ready)

If you are using RS-422, xmit hi, xmit lo, rcv hi, and rcv lo must be connected between the host and the workstation.

The following communications parameters are recommended for the host ID file on the workstation:

Baud rate 4800
Word length 8
Parity None
Stop bits 1

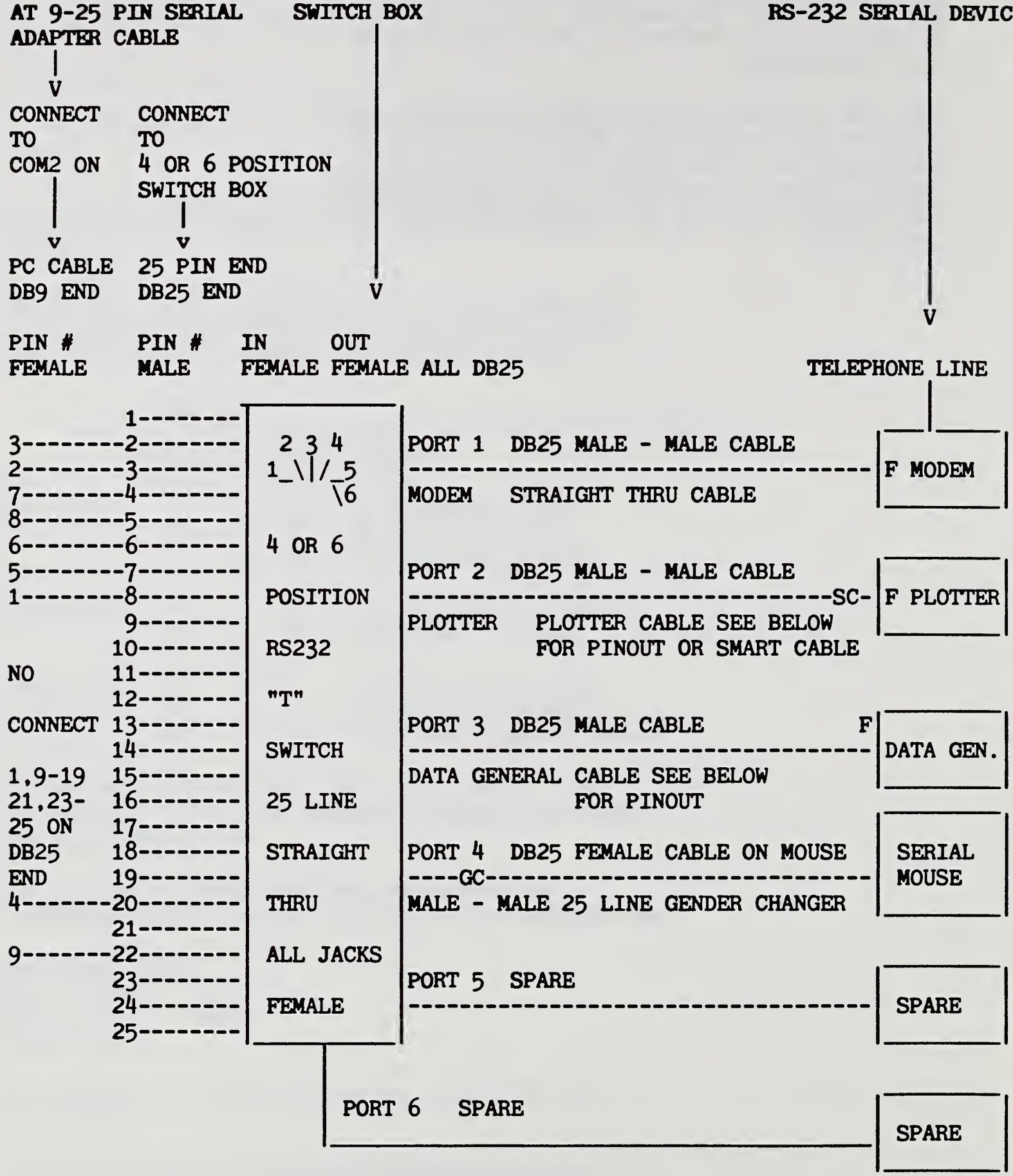
On the host, the characteristics should be set as follows:

```
CHAR/605X/LPP=24/CPL=80/BAUD=4800/PARITY=NONE&
/CHARLEN=8/STOPBITS=1/ON/ST/8BT/EBO/ULC/WRP/&
OFC/IFC/OFF/SFF/EPI/SPO/RAF/RAT/RAC/NAS/OTT/&
EOL/UCO/MRI/FF/EB1/PM/NRM/MOD/TO/TSP/PBN/ESC/&
FKT/NNL/SHR/CALLOUT
```

4800 baud is recommended over 9600 for CEOBLAST. If you are using a modem, you may want to turn MOD on (ON/MOD). You must use a line from the MV that has been defined by the sysgen program as a modem line.

Your CEO profile must give you CLI privileges in order to use the Send and Retrieve features of the Connection. Also, your AOS/VS user profile should log you on to CLI.PR. The CHANGE ADDRESS TYPE question and the USE IPC question must be set to YES.

IBM OR COMPAQ 9 PIN SERIAL PORT TO RS232 ADAPTER CABLE PINOUT

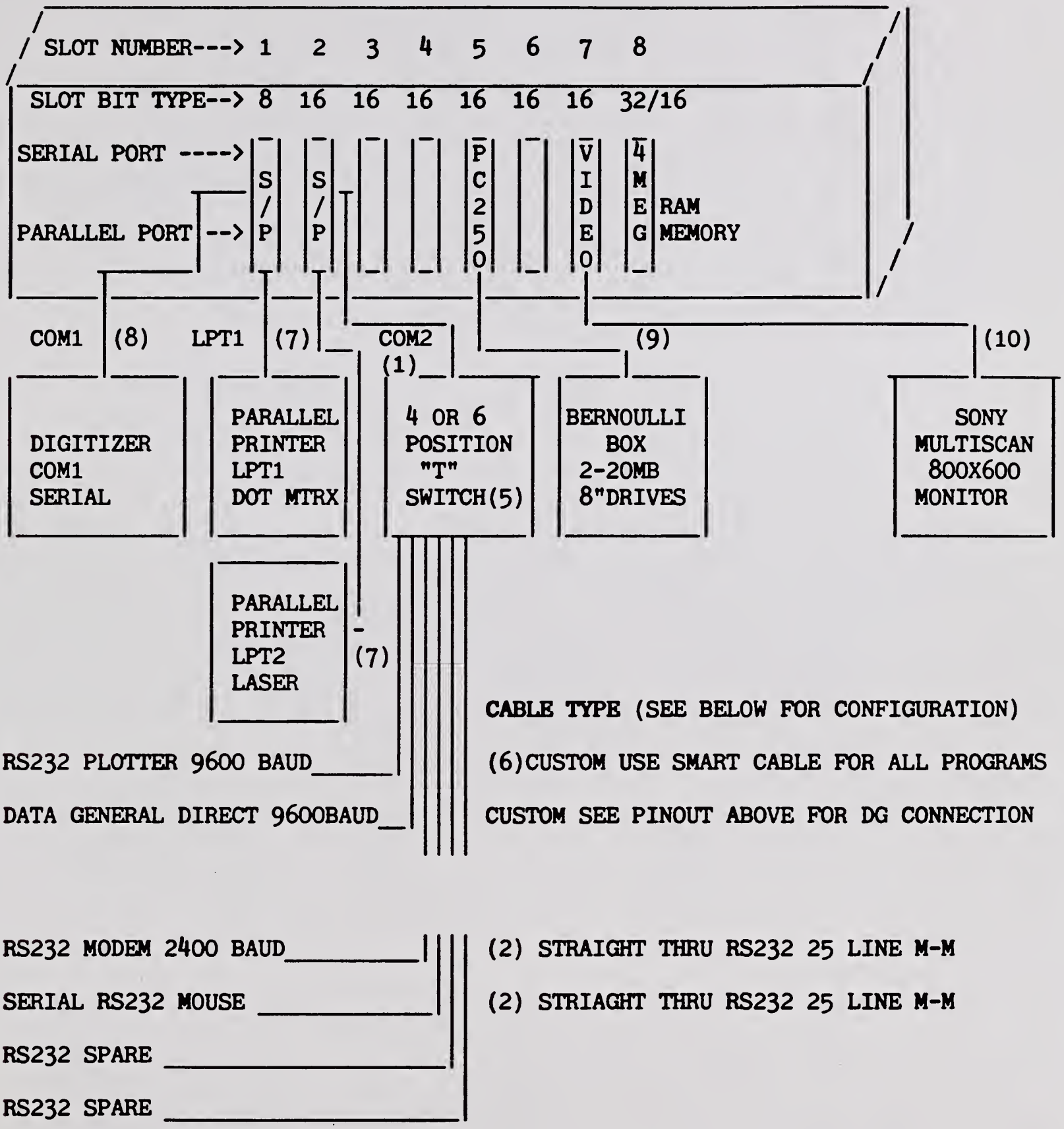


MICROCOMPUTER HARDWARE CABLING CONFIGURATION FOR 286/386 MACHINES

SLOTS VIEWED FROM REAR

(1,2-10) INDICATES CABLE TYPE SEE LIST BELOW

286 OR 386 AT TYPE BUS CPU



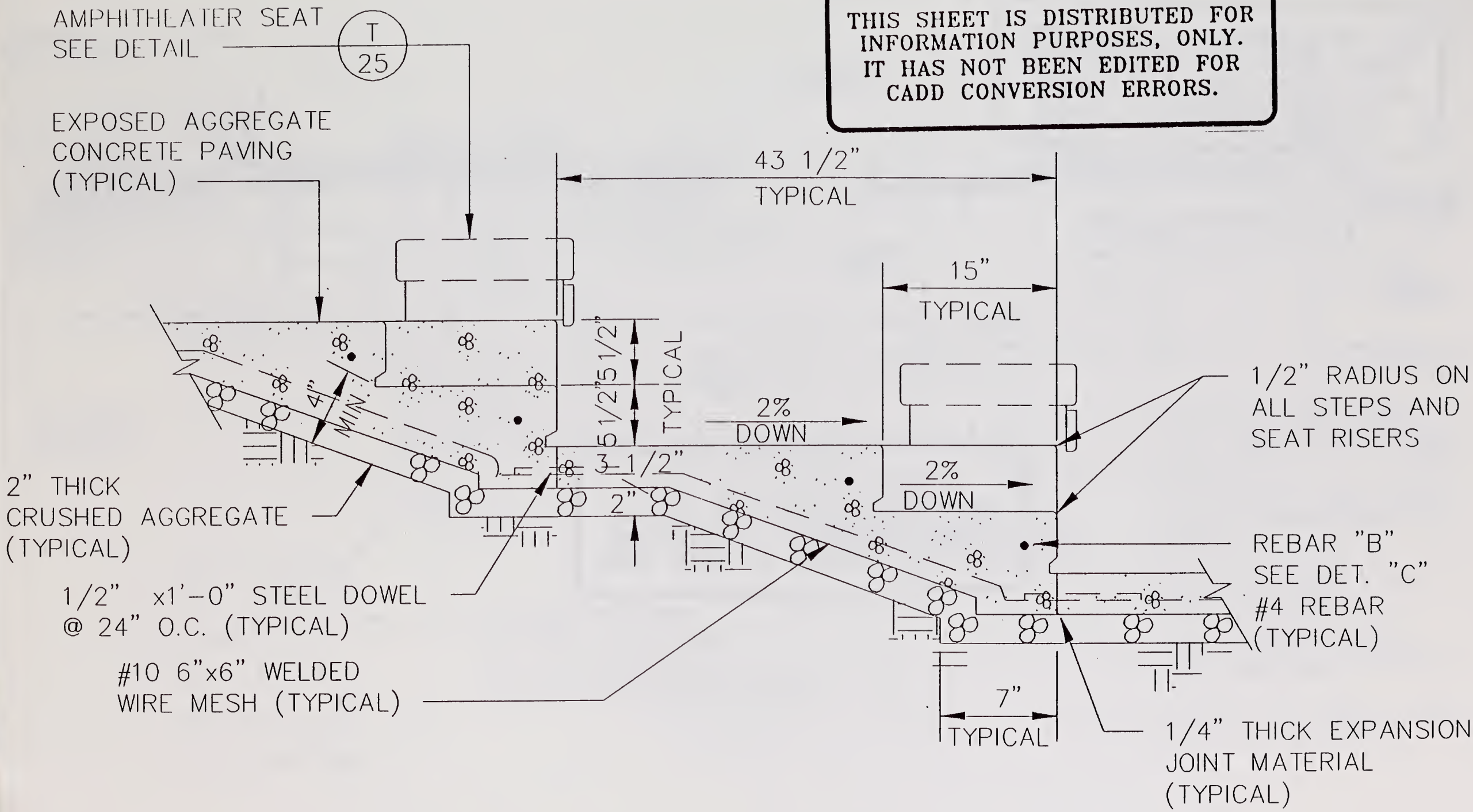
CABLES AVAILABLE NORVAC ELECTRONICS BEAVERTON

1.	DB9-DB25 AT ADAPTER CABLE	$9.00
2.	DB25-DB25 MALE-MALE CABLE 25 LINE STRAIGHT THRU	$11.00
3.	DB25-DB25 MALE FEMALE CABLE 25 LINE STRAIGHT THRU	$11.00
4.	M-M OR F-F 25 LINE GENDER CHANGER (GC)	$ 5.00
5.	4 POSITION RS-232 "T" SWITCH	$40.00
6.	IQ TECHNOLOGIES SMART CABLE 817 RS232	$50.00
7.	RS232-CENTRONICS PARALLEL CABLE FOR PRINTER	$10.00
8.	DIGITIZER CABLE CUSTOM SEE DIAGRAM BELOW	$25.00
9.	BERNOULLI CABLE SUPPLIED WITH BERNOULLI BOX AND PC2-50 CARD	
10.	VIDEO CABLE 9 PIN - 9PIN DIGITAL OR VGA ANALOG CABLE	$30.00

SMART CABLE WILL CONNECT ANY TWO SERIAL DEVICES, SUCH AS PLOTTER - PC, MODEM-PC AUTOCAD HAS A DIFFERENT CABLE PINOUT THAN SOME BUSINESS GRAPHICS PROGRAMS, SUCH AS CHART MASTER. THE SMART CABLE HAS SEVERAL SWITCHES THAT ARE MOVED UNTIL SEVERAL LED LIGHTS GO ON. CONFIGURING FOR A DIFFERENT DEVICE IS A MATTER ONLY 2 SWITCH SETTINGS. THIS TAKES ONLY 10 SECONDS AND CAN BE CHANGED FOR DIFFERENT DEVICES INSTANTLY.

DIVID-9.DWG

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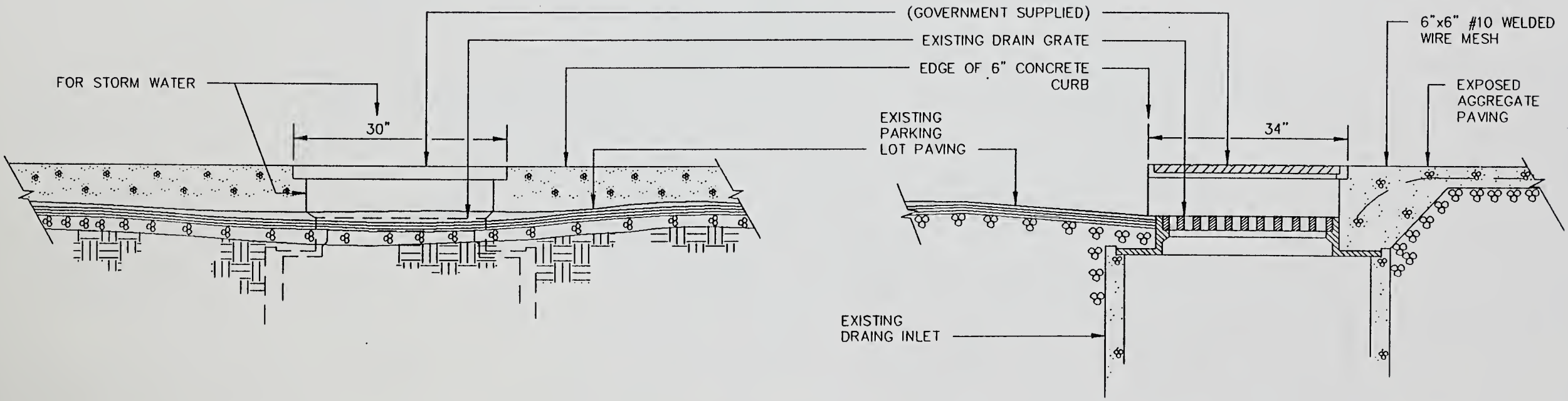


D 25 AMPHITHEATER STEPS

LDST 6005 SECTION



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DRAIN GRATE SOLID LID

FRONT VIE

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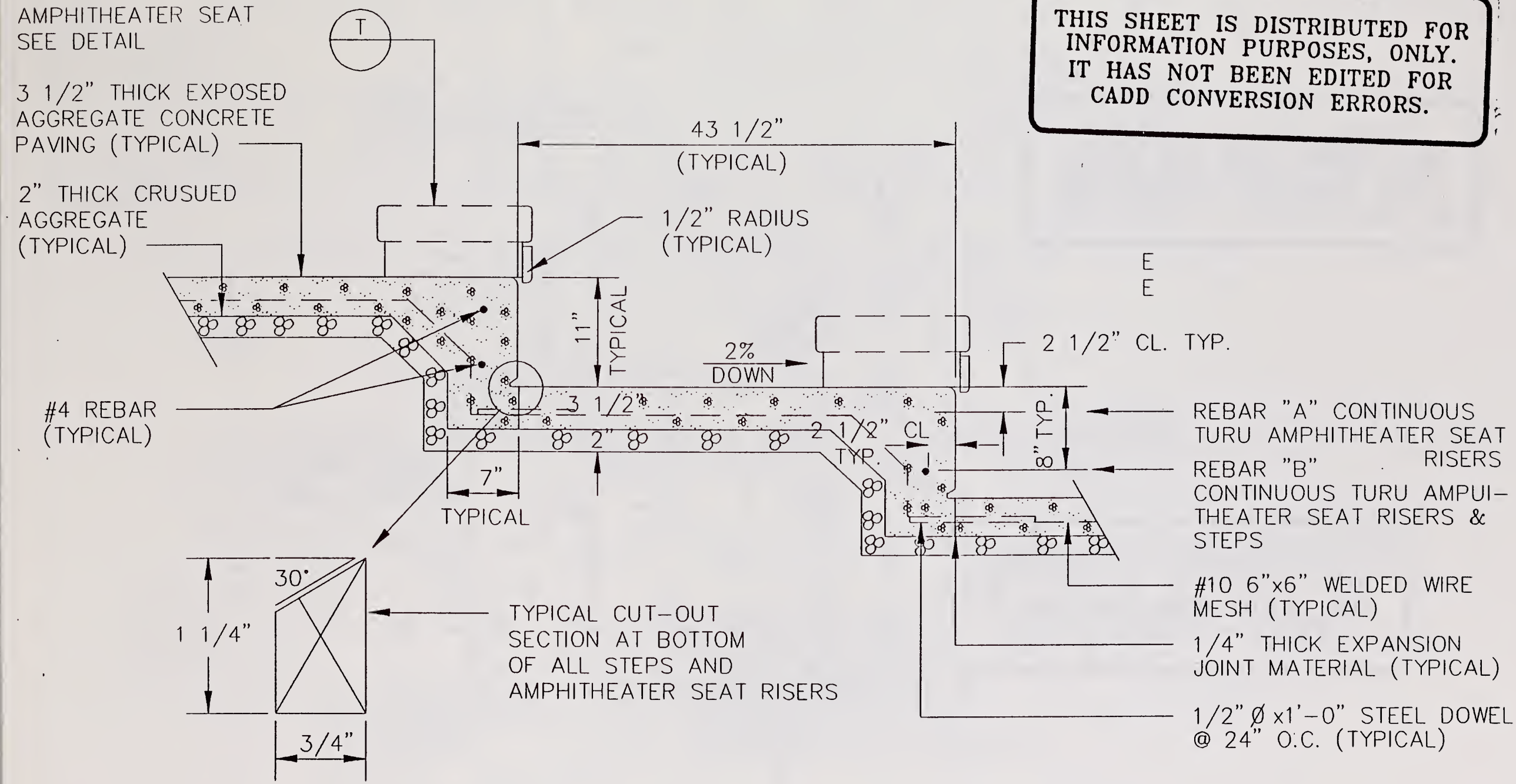
DRAIN GRATE SOLID LID

SECTION

0 1/2 1 2 3'

<DDR 6003

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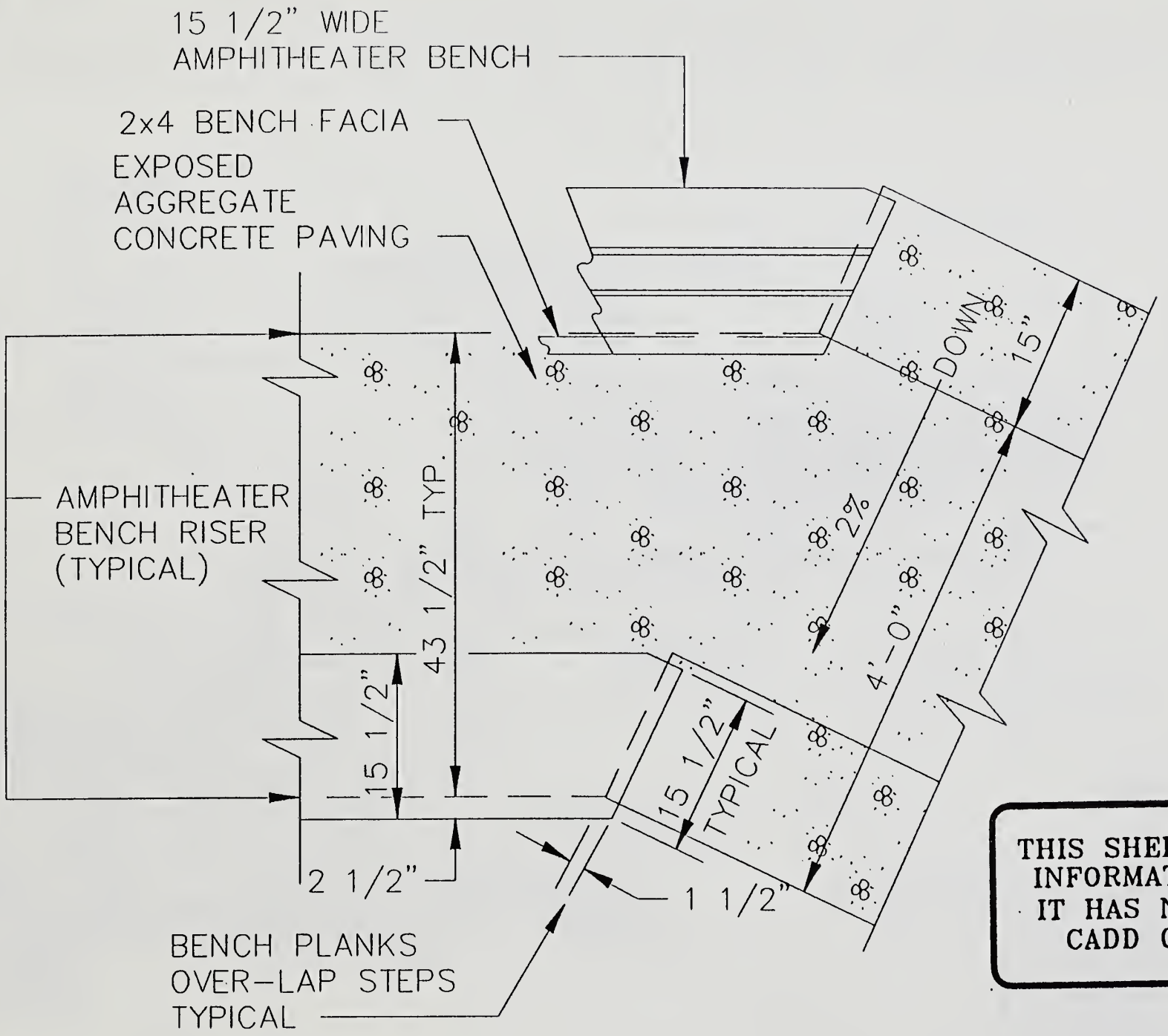


C
25

AMPHITHEATER SEAT RISERS

LDBE 6006 SECTION

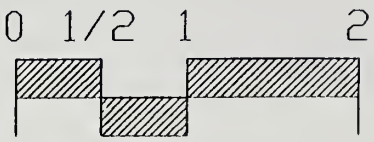
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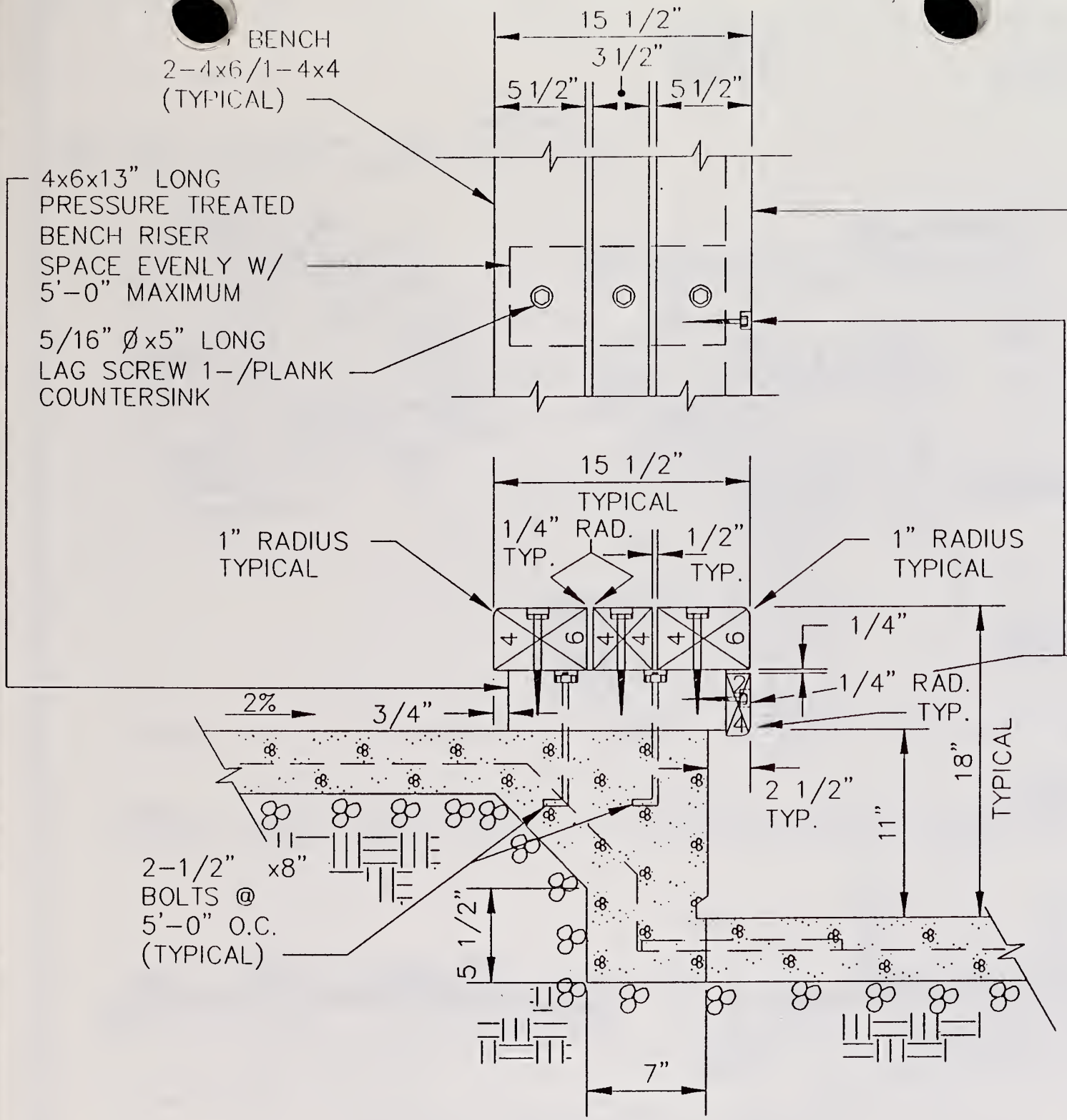


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S/25 AMPHITHEATER BENCH & STAIRS

LDBE 6005 PLAN VIEW @ SOUTH WALL



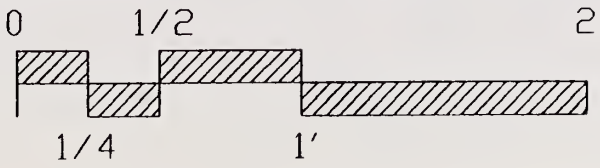


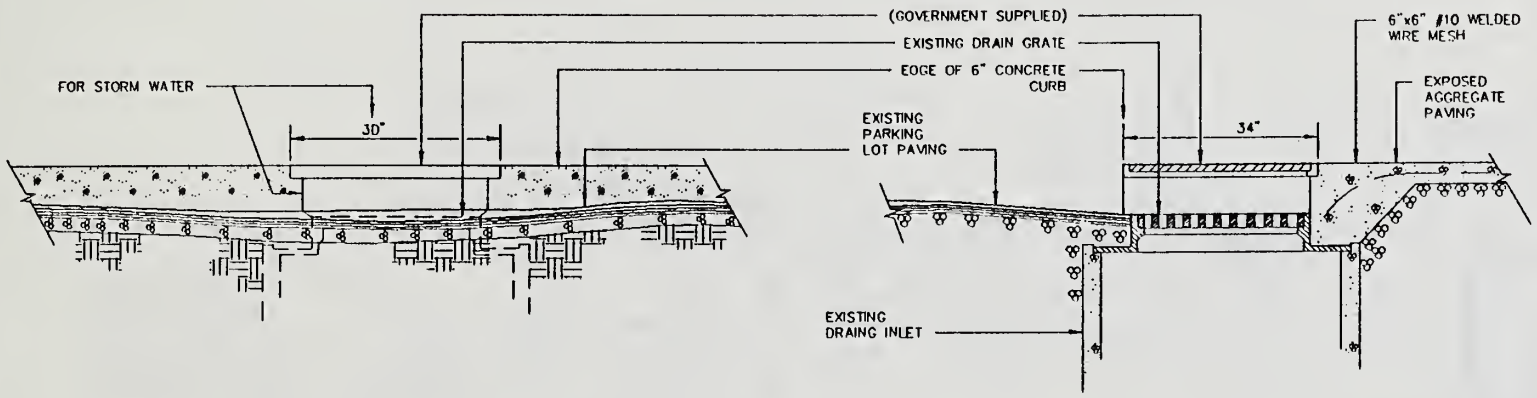
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25

AMPHITHEATER BENCH

LDBE 6004





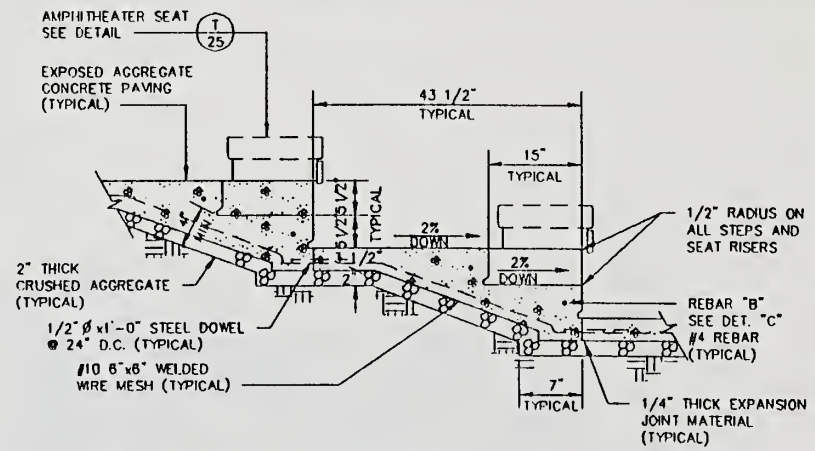
DRAIN GRATE SOLID LID

FRONT VIEW

(E/25) DRAIN GRATE SOLID LID

SECTION 11-9-88

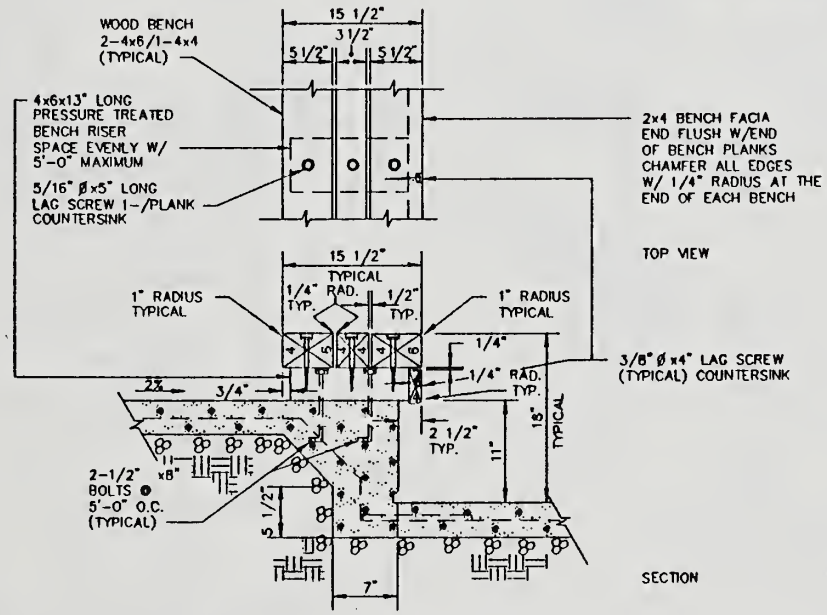
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(D/25) AMPHITHEATER STEPS

LDST 6005 SECTION 11-9-88

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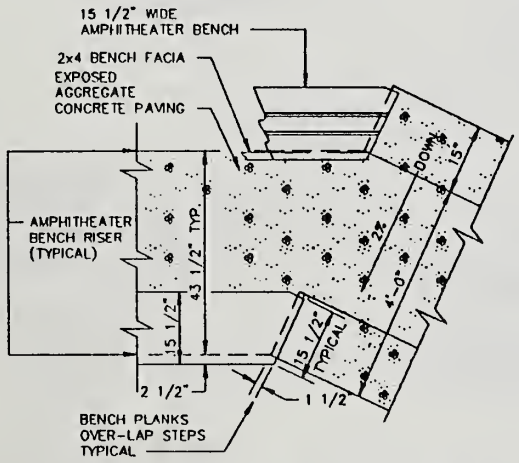


(T/25) AMPHITHEATER BENCH

LDBE 6004 11-9-88

0 1/2 2'

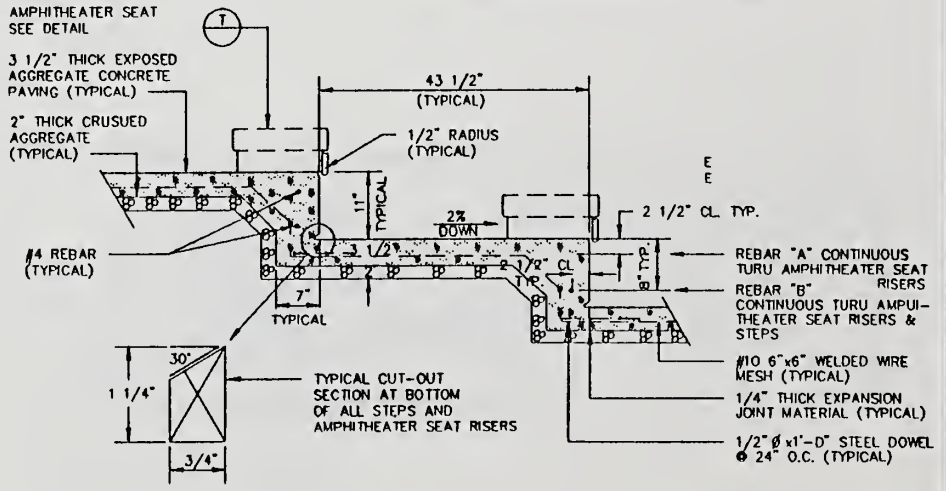
1/4 1'



(S/25) AMPHITHEATER BENCH & STAIRS

LDBE 6005 PLAN VIEW @ SOUTH WALL 11-9-88

0 1/2 1 2



(C/25) AMPHITHEATER SEAT RISERS

LDBE 6006 SECTION 11-9-88

0 1/2 1 2 3'

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ALL BLOCKS IN THIS DRAWING WERE INSERTED 1 TO 1. THE D-SIZE DWG. WAS PLOTTED 1 TO 1.

REC00025

11-7-88

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

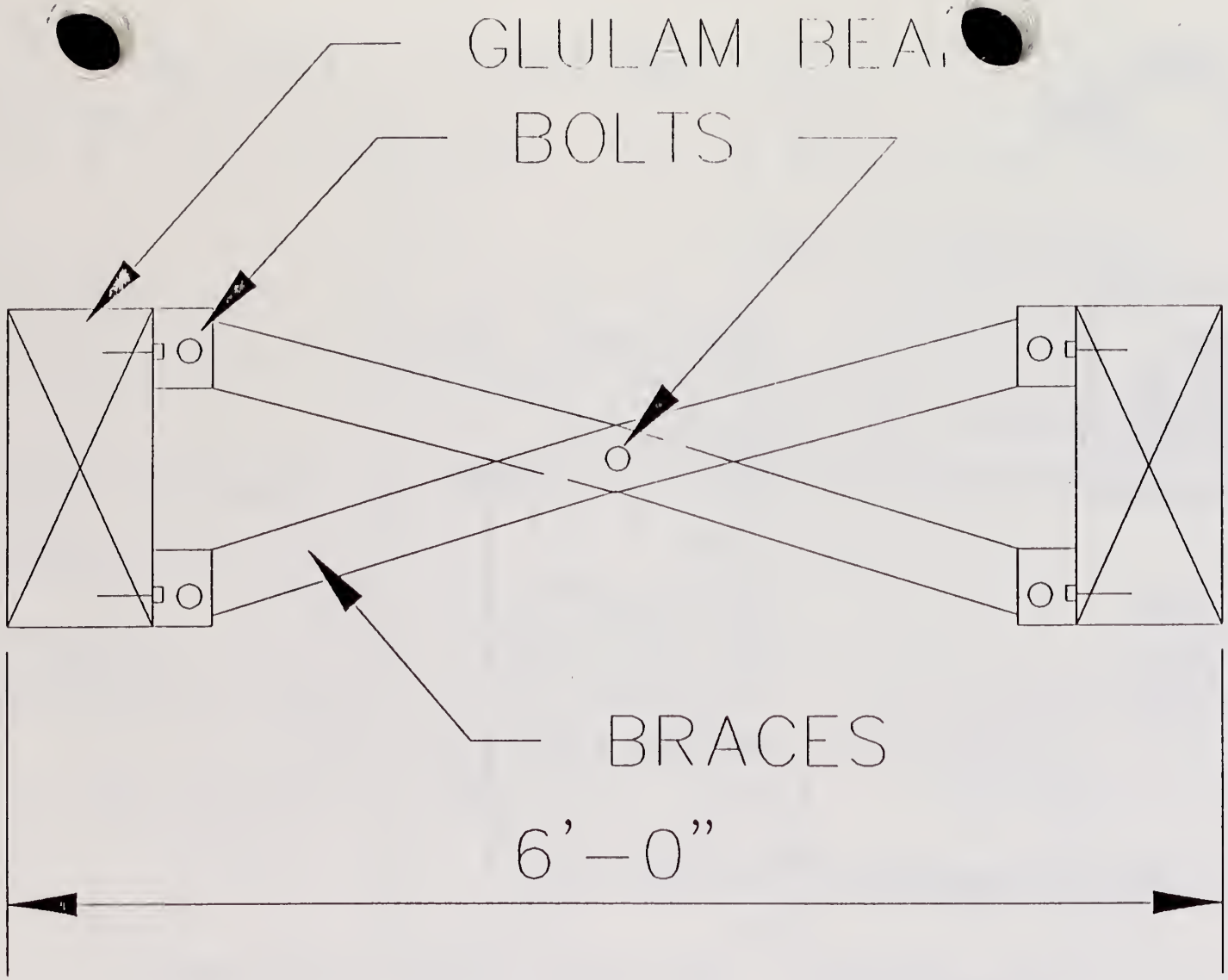
DRAWN DATE 11-7-88
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

DRAIN GRATES, STEPS AND [illegible]CHES

REC[illegible]25

SHT. 1
OF 1

GLULAM BEA[illegible]

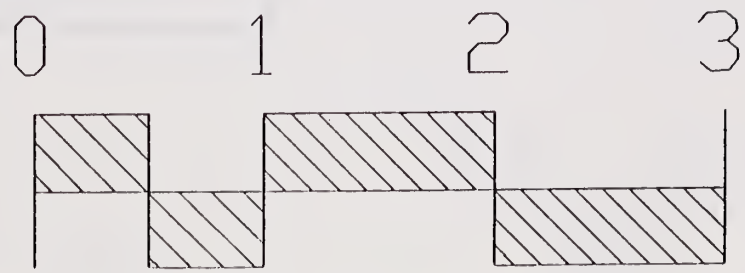


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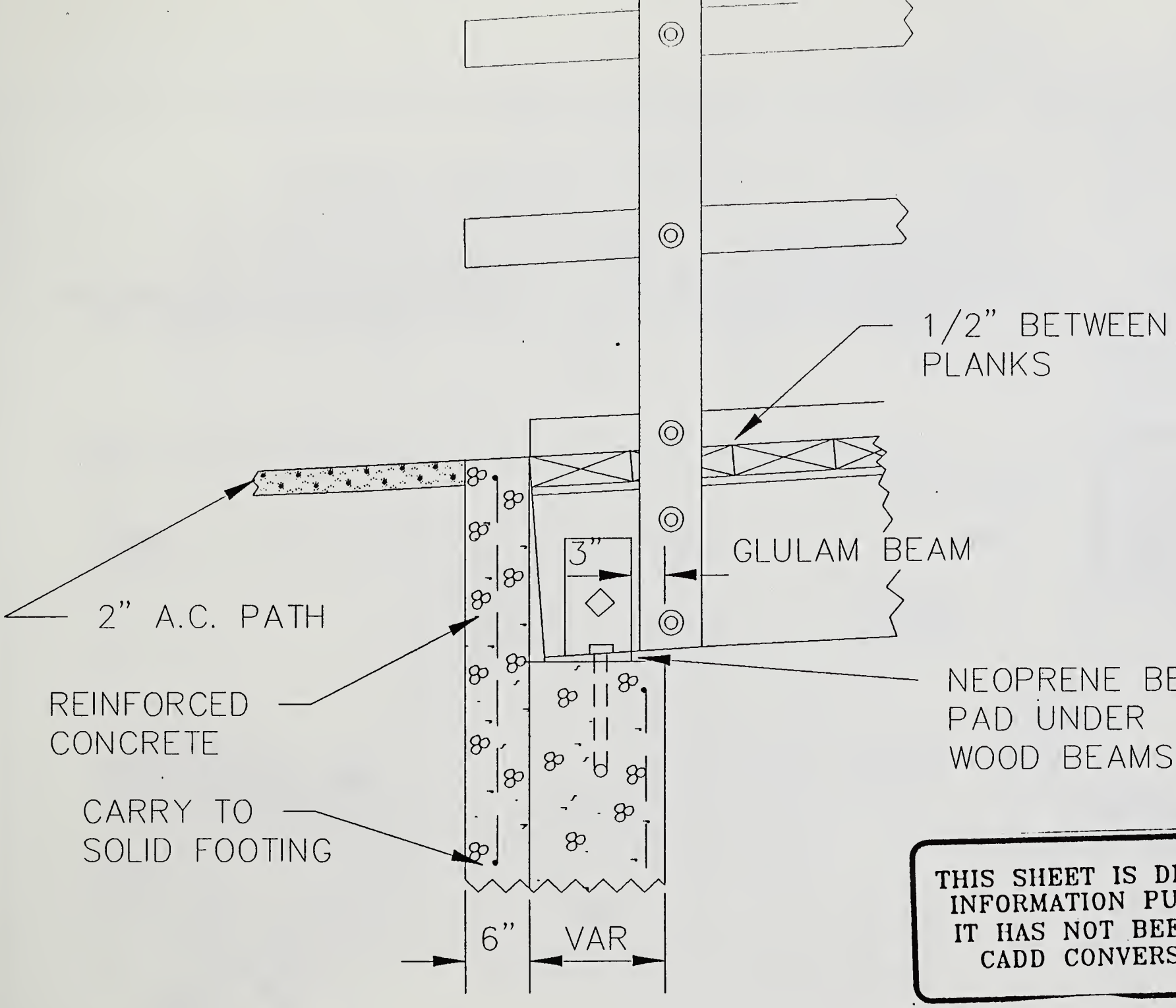
DIAGONAL BRACING

LDBR 6004

11-3-88



1/2

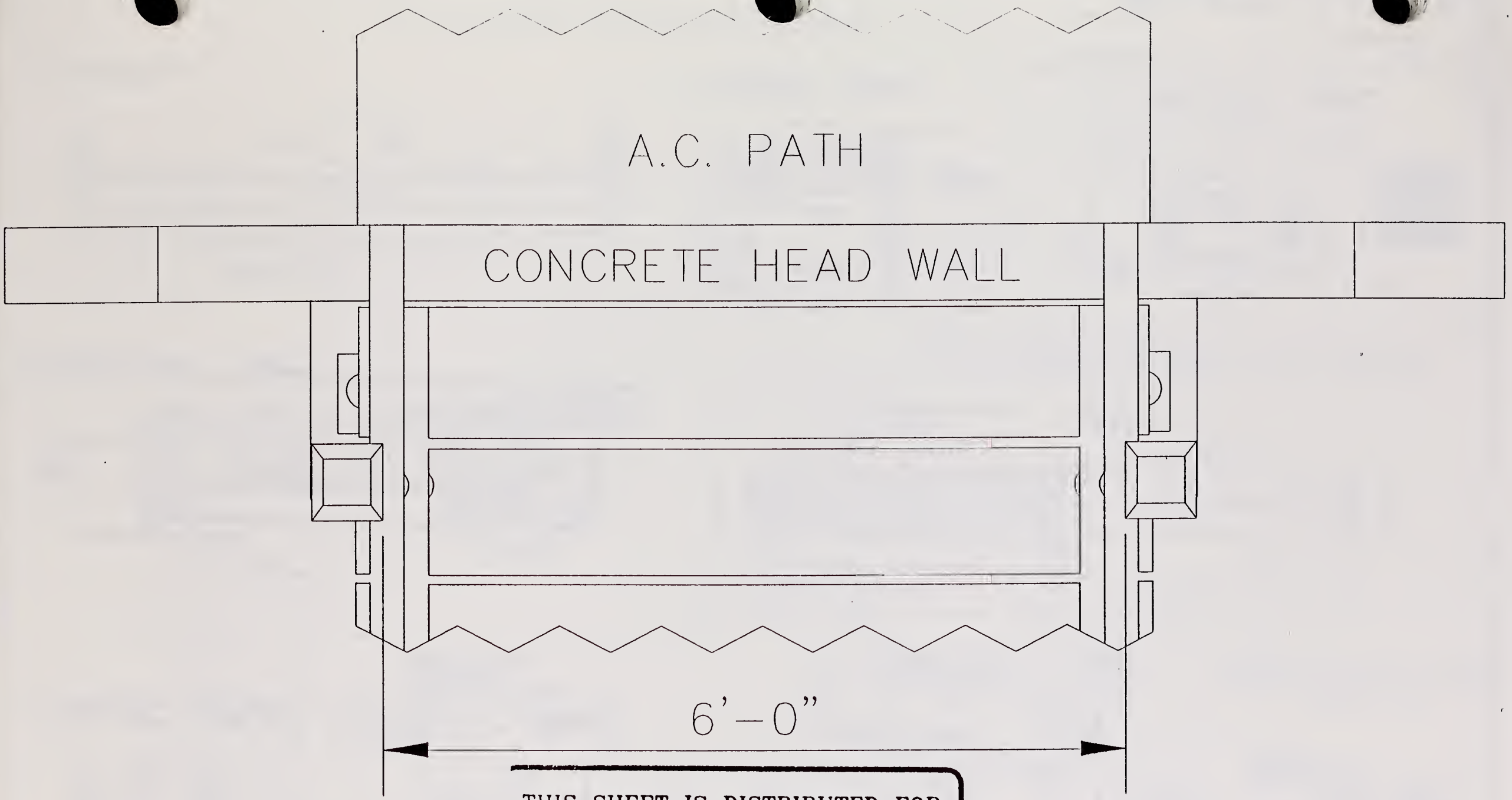


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ELEVATION DETAIL

BR 6003 11-3-88

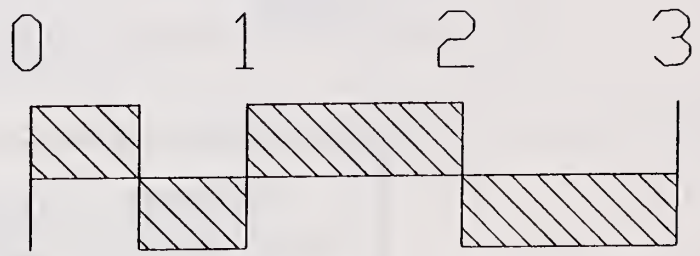
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TOP VIEW

LDBR 6002 11-3-88

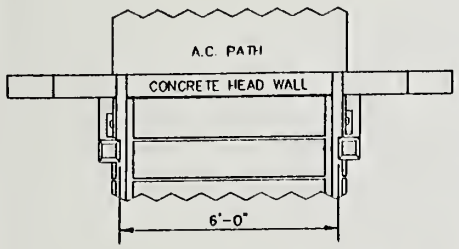


1/2

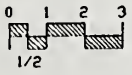
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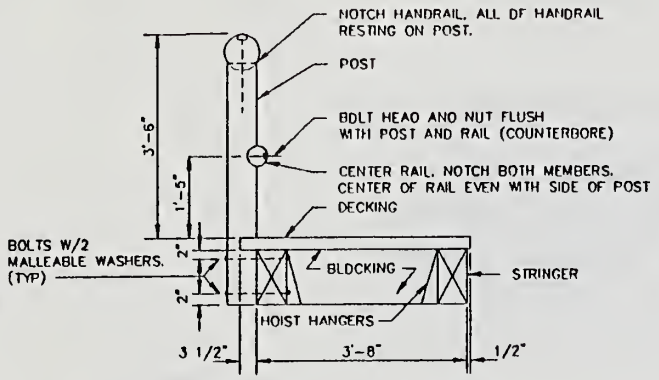
IMPORTANT NOTE

THIS DRAWING IS ONLY AN IDEA. CONSULT WITH ENGINEERS FOR SPECIFICATIONS.

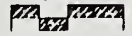


TOP VIEW
LDBR 6002 11-3-88



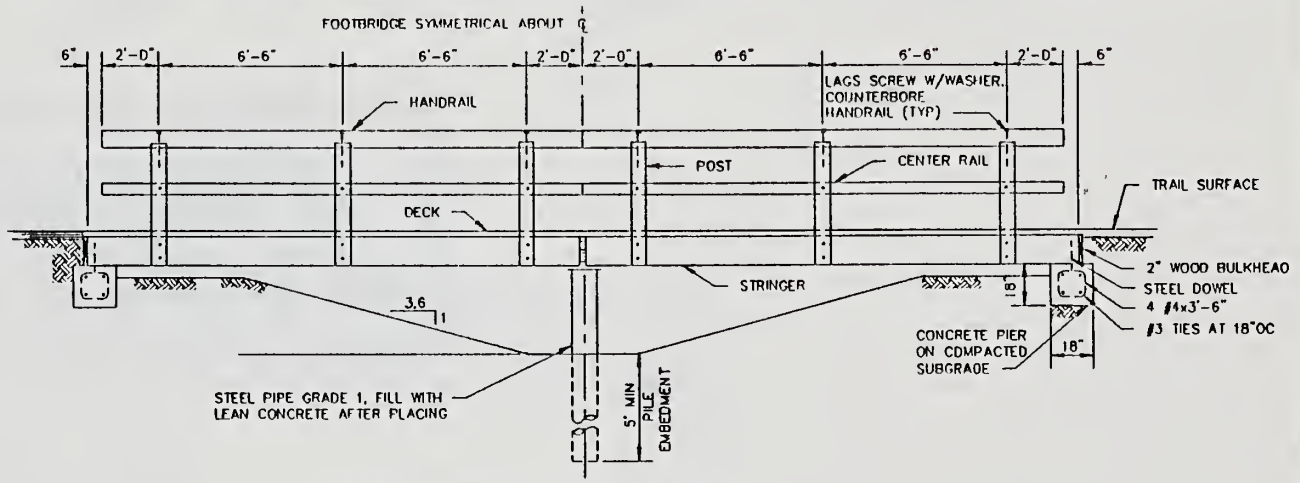


SECTION A-A
LDBR 6010 11-3-88

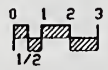


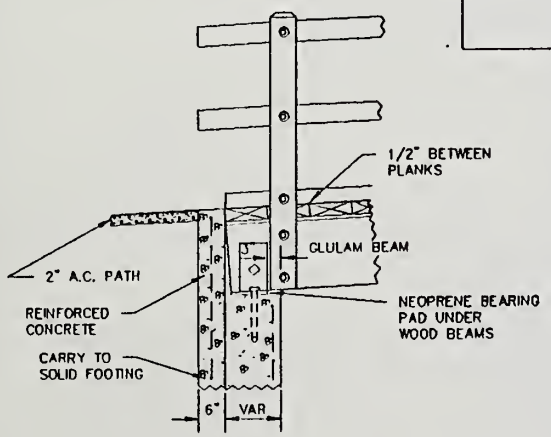
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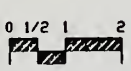


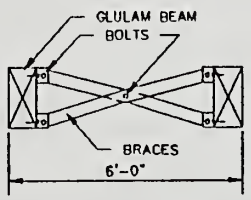
ELEVATION
LDBR 6009 11-3-88



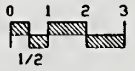


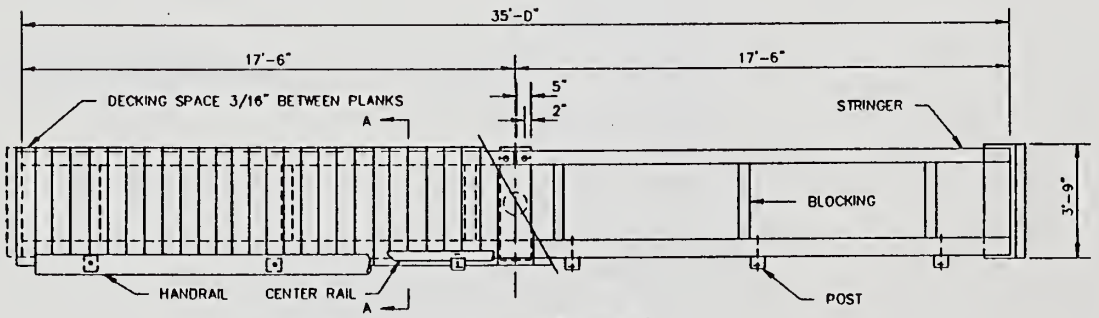
ELEVATION DETAIL
LDBR 6003 11-3-88



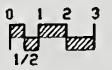


DIAGONAL BRACING
LDBR 6004 11-3-88

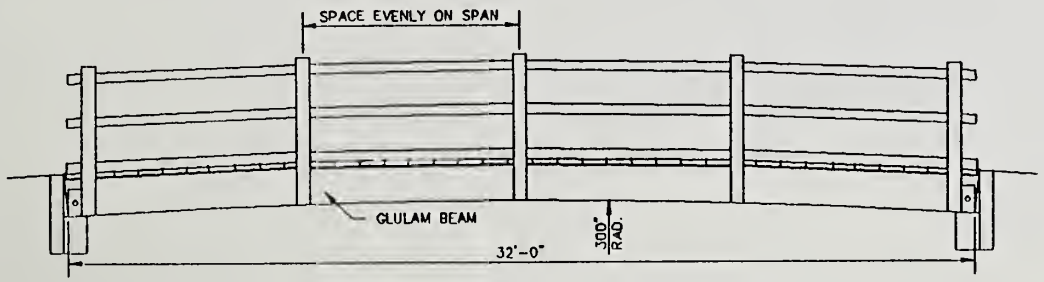




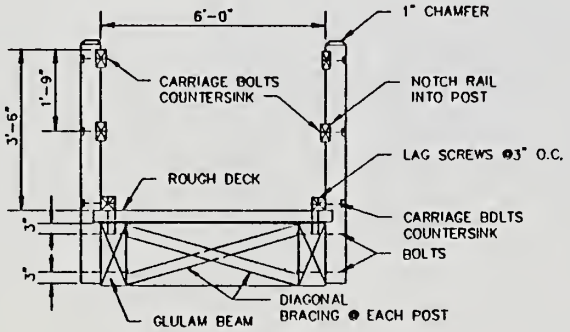
PLAN
LDBR 6008 11-3-88



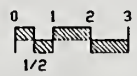
FOOTBRIDGE W/STEEL PIPE SUPPORT

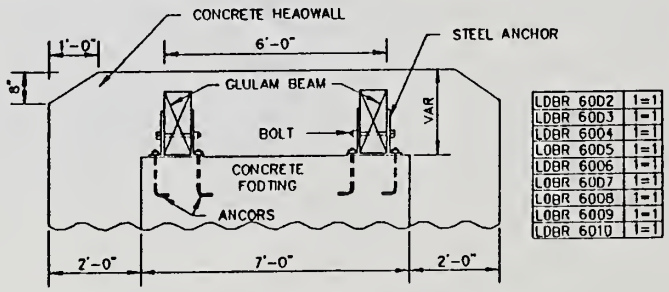


ELEVATION
LDBR 6005 11-3-88



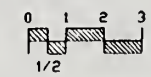
SECTION
LDBR 6006 11-3-88





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LDBR 6003	1=1
LDBR 6004	1=1
LDBR 6005	1=1
LDBR 6006	1=1
LDBR 6007	1=1
LDBR 6008	1=1
LDBR 6009	1=1
LDBR 6010	1=1

BEAM SUPPORT
LDBR 6007 11-3-88



FOOTBRIDGE W/GLUELAM SUPPORT

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FOREST SERVICE
THE PACIFIC NORTHWEST REGION

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CHECKED DATE
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FOOTBRIDGES

RECOO 5

SHT. 1
OF 1

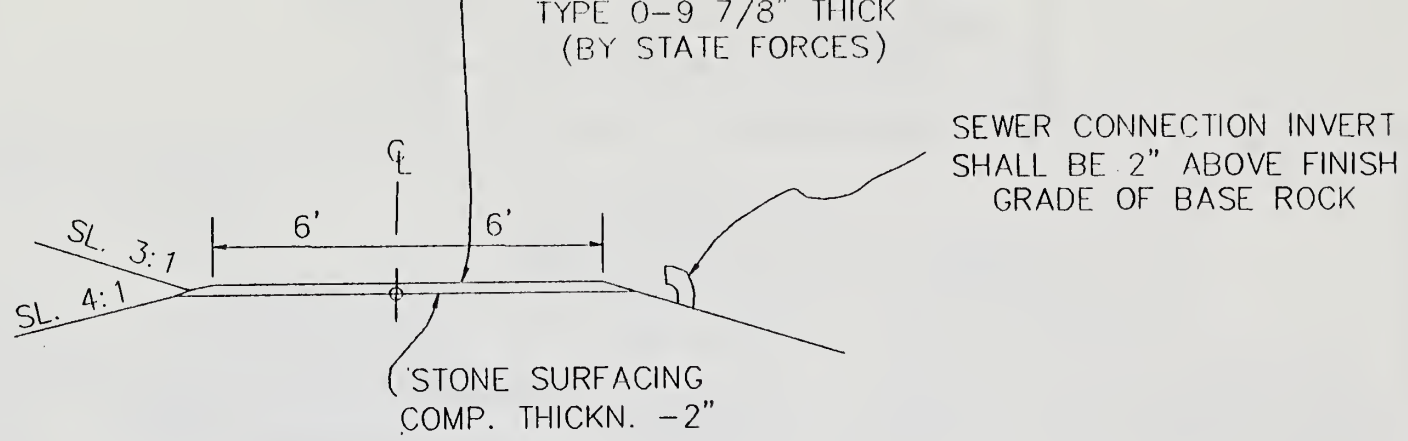
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SECTION A-A

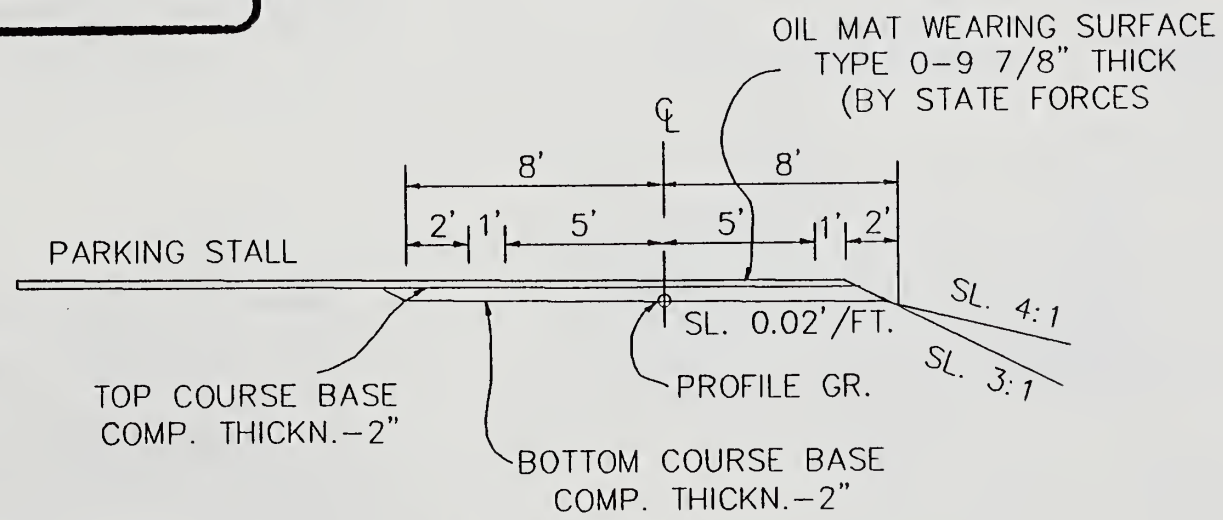
SECTION A-A

LDCS 6006 0 1 2 4 8 SCALE: 1"=3/16"



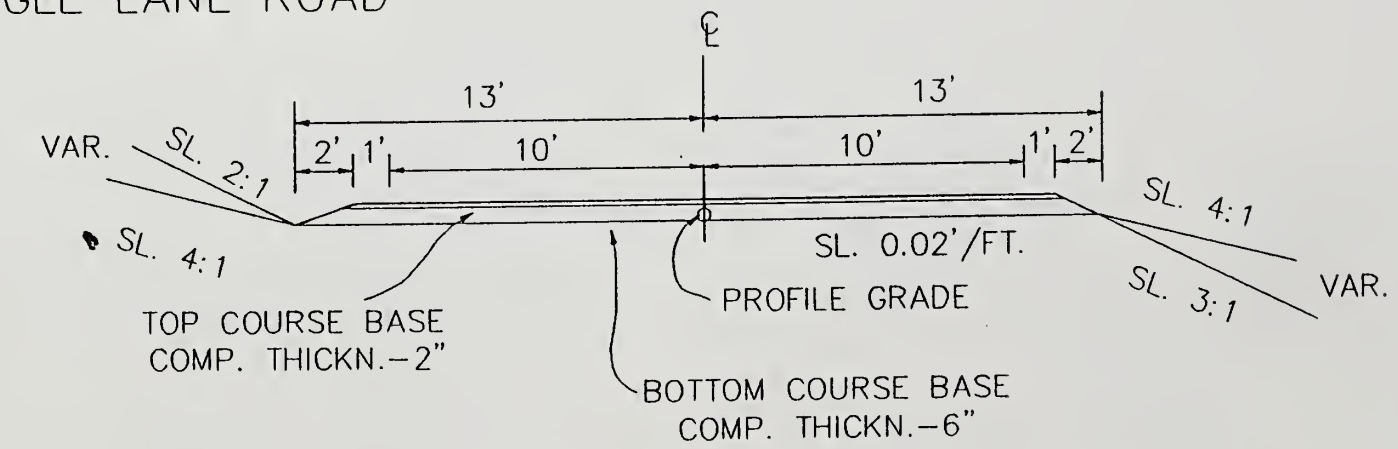
PARKING STALL

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SINGLE LANE ROAD

NOTE: FOR PLANS SEE DETAILS LDCS 6003 & 6004; SHEET: REC. 00021



TWO LANE ROAD

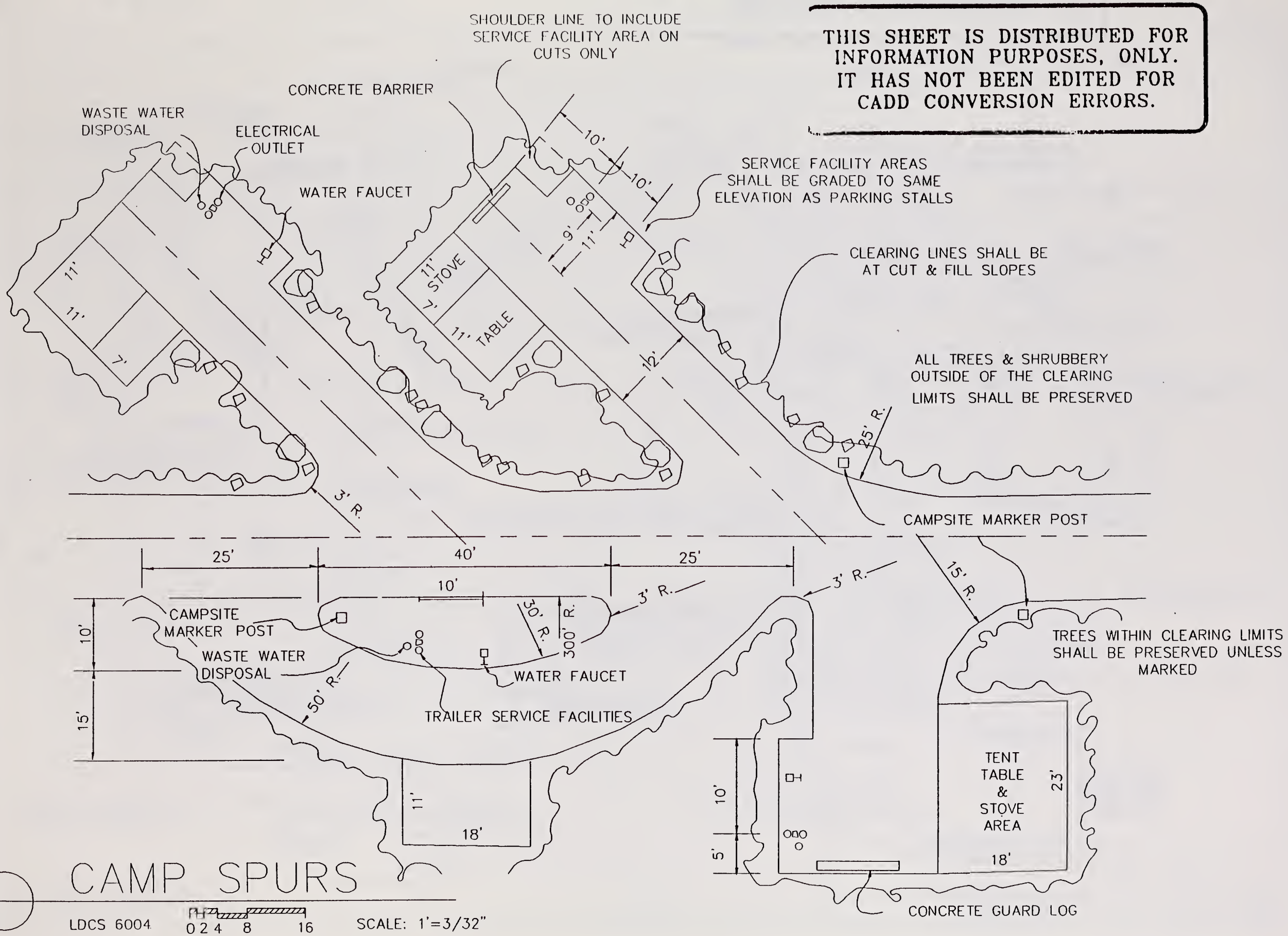
CAMP SPURS

LDCS 6005

0 1 2 4 8

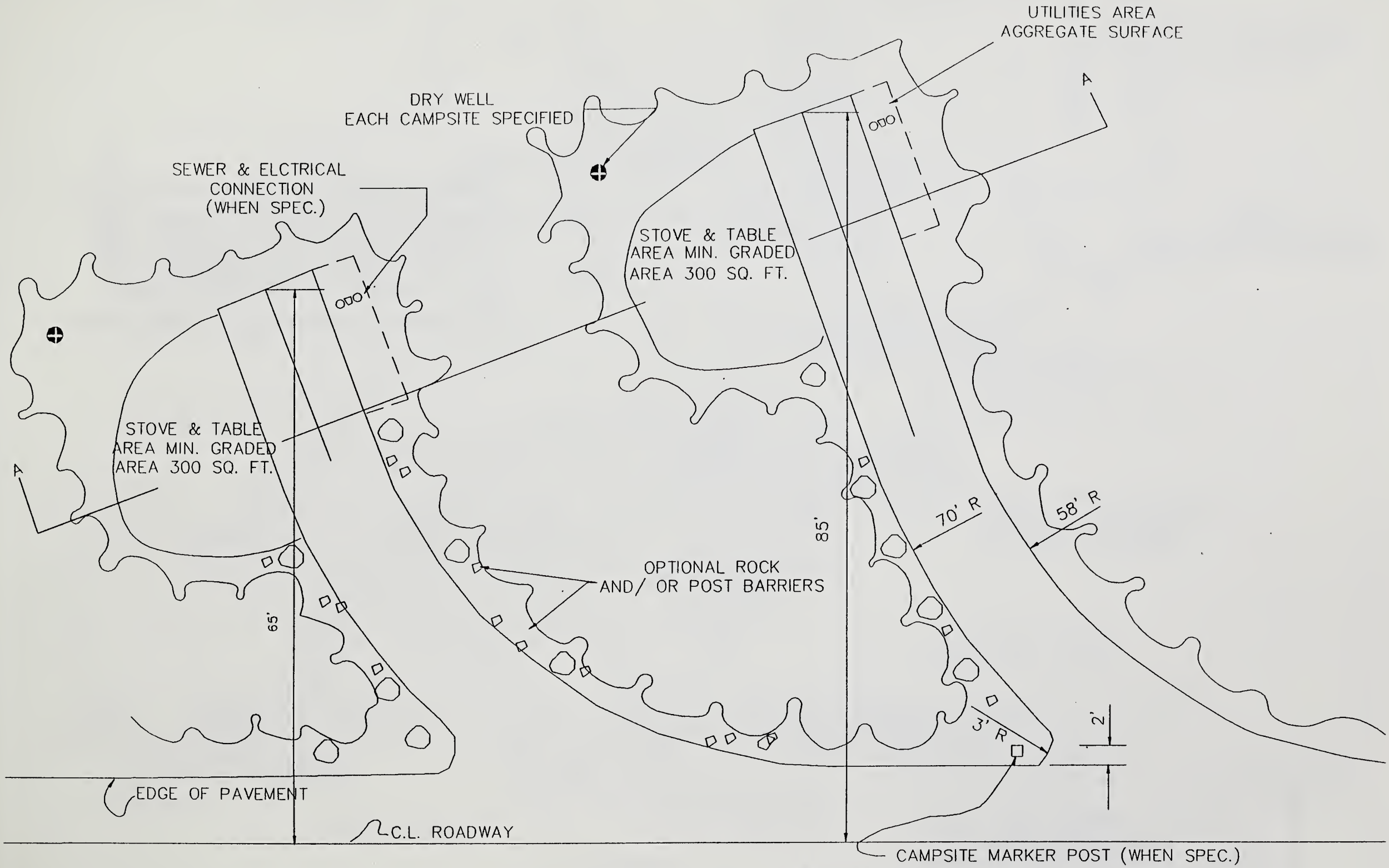
SCALE: 1'=3/16"

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CAMP SPURS

LDCS 6004 0 2 4 8 16 SCALE: 1'=3/32"



CAMP SPURS

6003

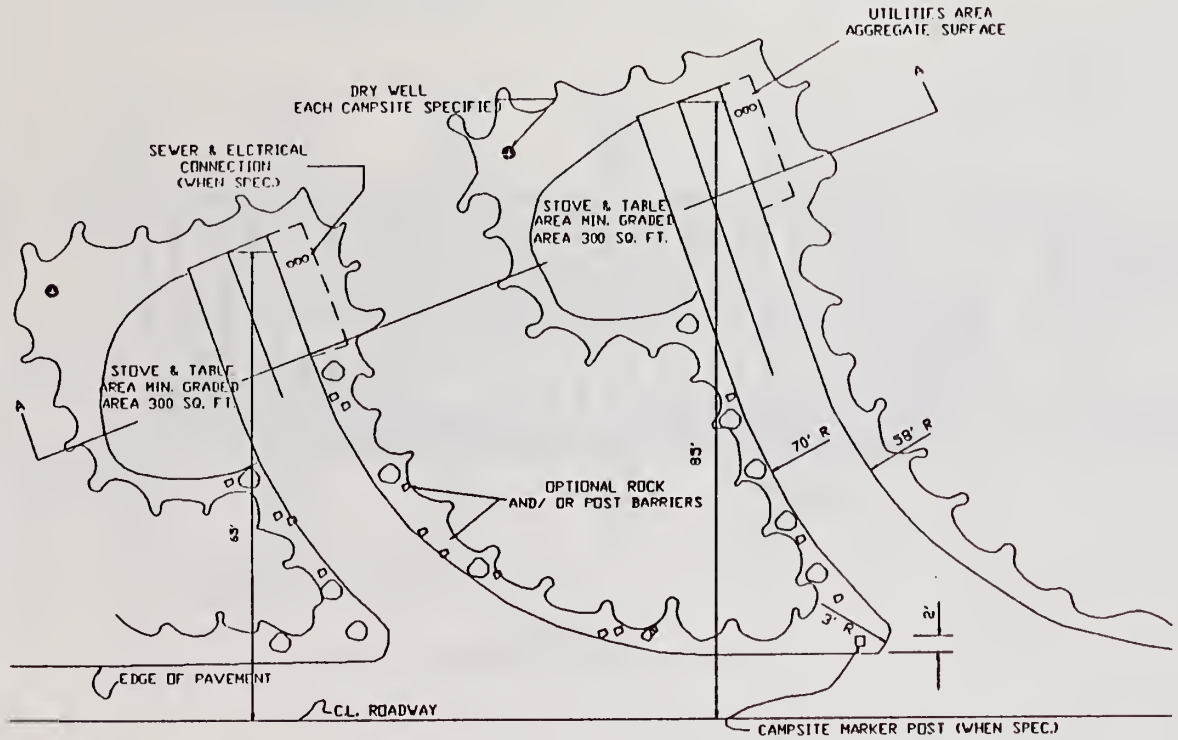
0 2 4 8 16

SCALE: 1'=3/32"

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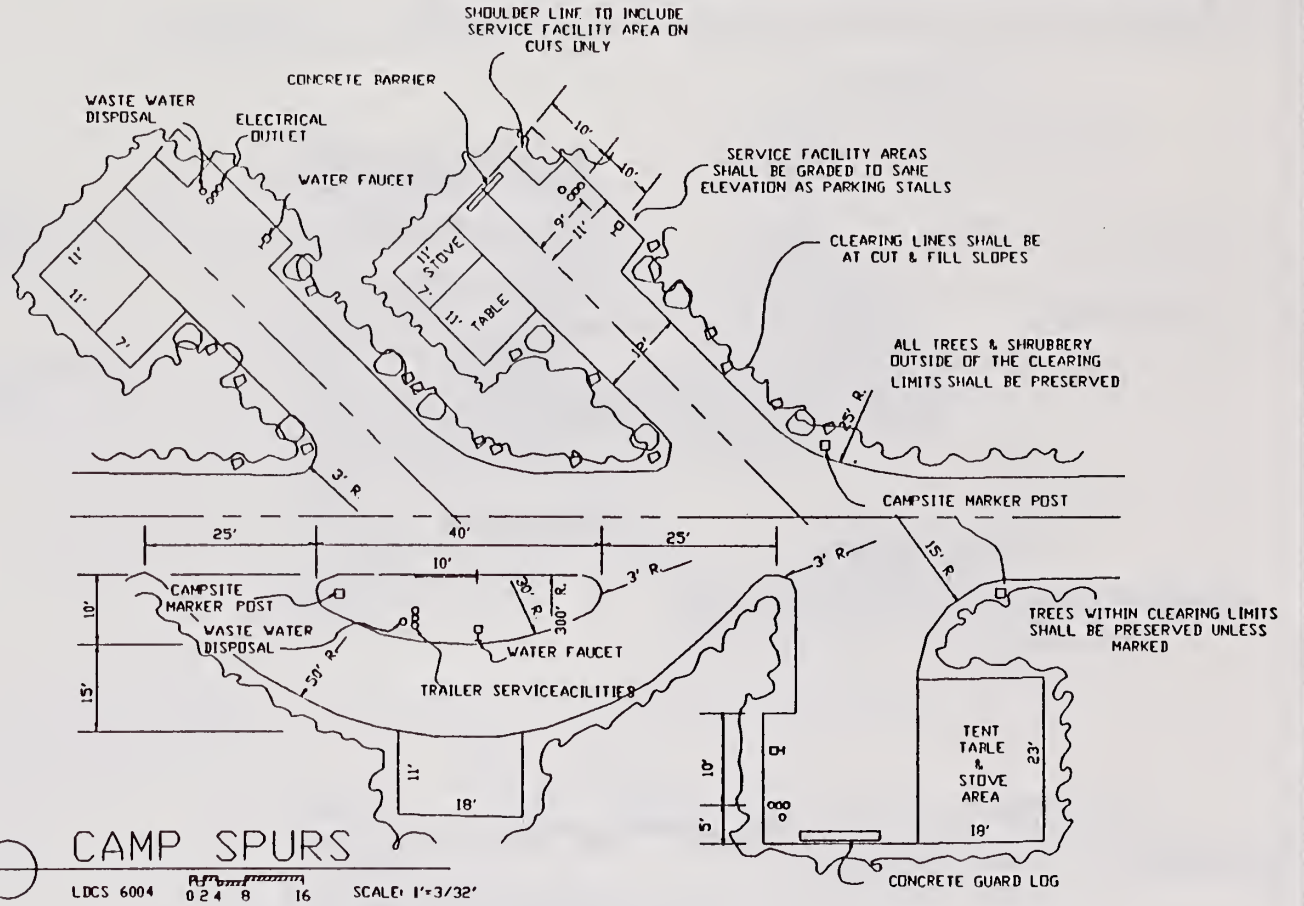
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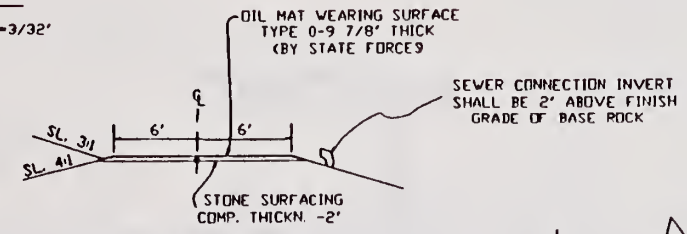
CAMP SPURS

LDCS 6003 0 2 4 8 16 SCALE: 1"=3/32'

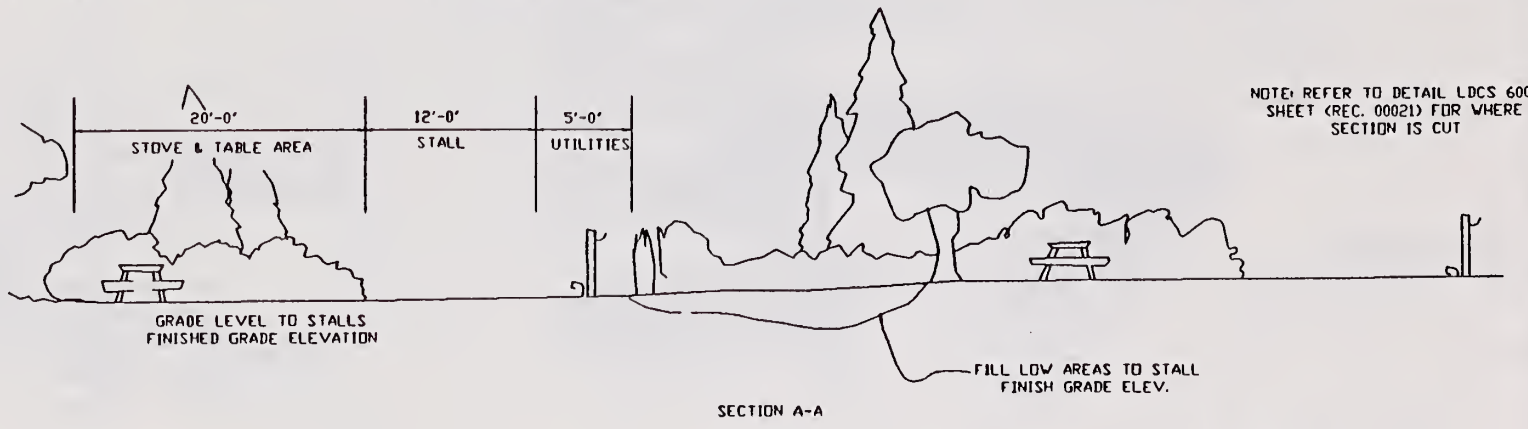


CAMP SPURS

LDCS 6004 0 2 4 8 16 SCALE: 1"=3/32'

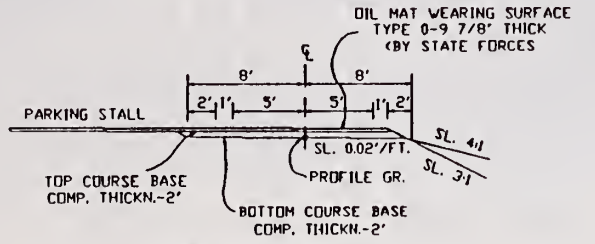


PARKING STALL



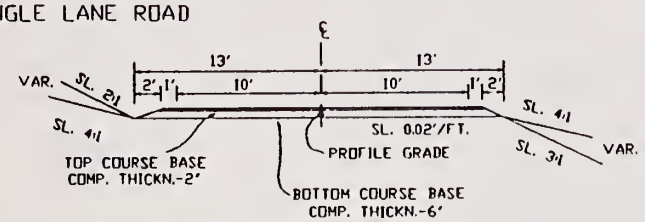
NOTE: REFER TO DETAIL LDCS 6003, SHEET (REC. 00021) FOR WHERE SECTION IS CUT

SECTION A-A



SINGLE LANE ROAD

NOTE: FOR PLANS SEE DETAILS LDCS 6003 & 6004; SHEET: REC. 00021



TWO LANE ROAD

SECTION A-A

LDCS 6006 0 1 2 4 8 SCALE: 1"=3/16'

CAMP SPURS

LDCS 6005 0 1 2 4 8 SCALE: 1"=3/16'

BLOCK #	INS. S.F.
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LDCS 6004	.00781
LDCS 6005	.01563
LDCS 6006	.01563

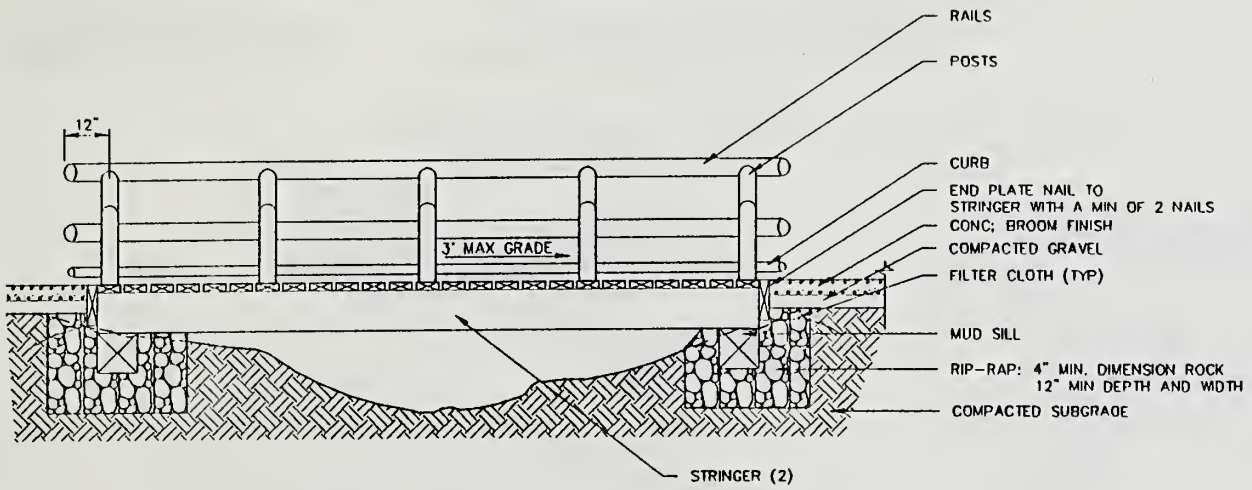
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FOREST SERVICE
THE PACIFIC NORTHWEST REGION

DRAWN DSH DATE 10-17-90
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

CAMP SITE SPURS & DETAILS

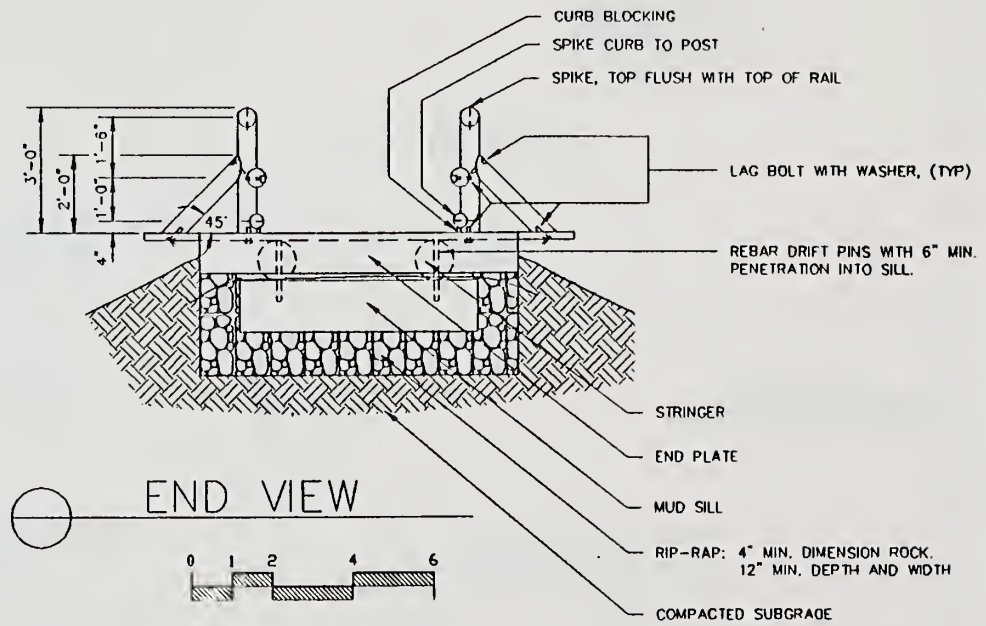
REC00021

SHT. 1 OF 1



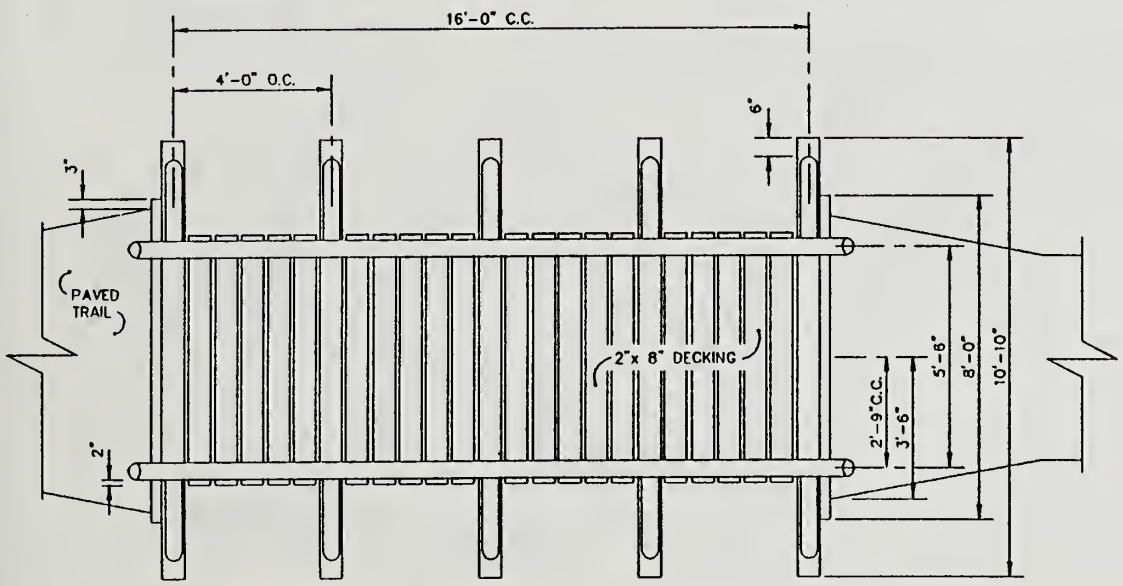
ELEVATION

0 1 2 4 6



END VIEW

0 1 2 4 6



PLAN VIEW

0 1 2 4 6

GENERAL NOTES:

1. ALL NATIVE MATERIAL SHALL BE SOUND AND FREE OF ROT AND OTHER DEFECT.
2. RAILINGS, POSTS, SUPPORTS AND CURBS SHALL BE CEDAR AND LEFT IN NATURAL COLOR.
   DECKING SHALL BE OF PRESSURE TREATED DOUG. FIR WITH OSMOSE-K-33, PRESERVATIVE TO .25 RETENTION.
   MUD SILLS & STRINGERS SHALL BE DOUG FIR PRESSURE TREATED WITH OSMORE K-33 PRESERVATIVE TO .60 RETENTION.
3. ALL HARDWARE TO BE HOT-DIPPED GALVANIZED AND WELL SEATED. HEADS OF NAILS, SPIKES AND LAG BOLTS SHALL BE RECESSED OR FLUSH WITH SURFACE OF WOOD.
4. EXPOSED ENDS OF ALL RUSTIC MATERIAL TO BE CHAMFERED FOR RUSTIC APPERANCE.
5. FINISHED ELEVATION OF BRIDGE DECKING SHALL MATCH FINISHED ELEVATION OF PAVEMENT WITH MAX. SURFACE SLOPE OF 3%.

INPORTANT NOTE

THIS DRAWING IS ONLY AN IDEA. CONSULT WITH ENGINEERS FOR SPECIFICATIONS.

FOOT BRIDGE

LDBR 6001

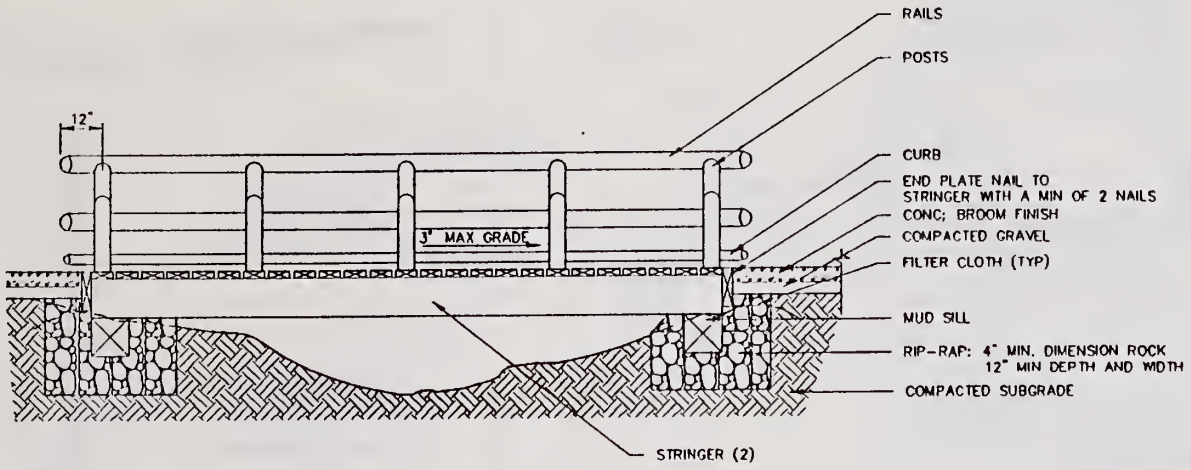
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THIS SHEET IS DISTRIBUTED FOR

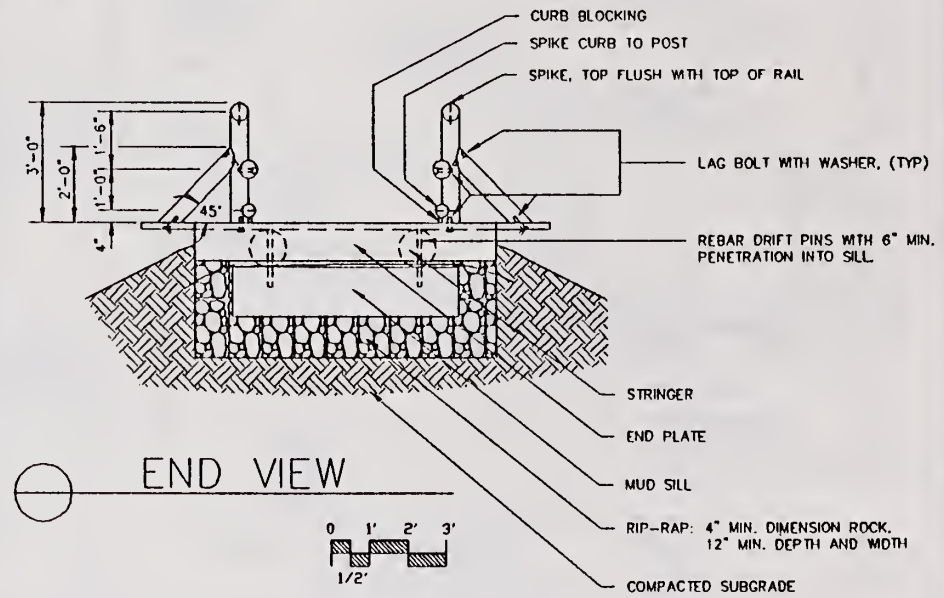
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INSERT FACTOR IS .04166 FOR ALL RECBLOCK ON THIS DRAWING
D-SIZE DRAWING WILL BE PLOTTED AT 1=1



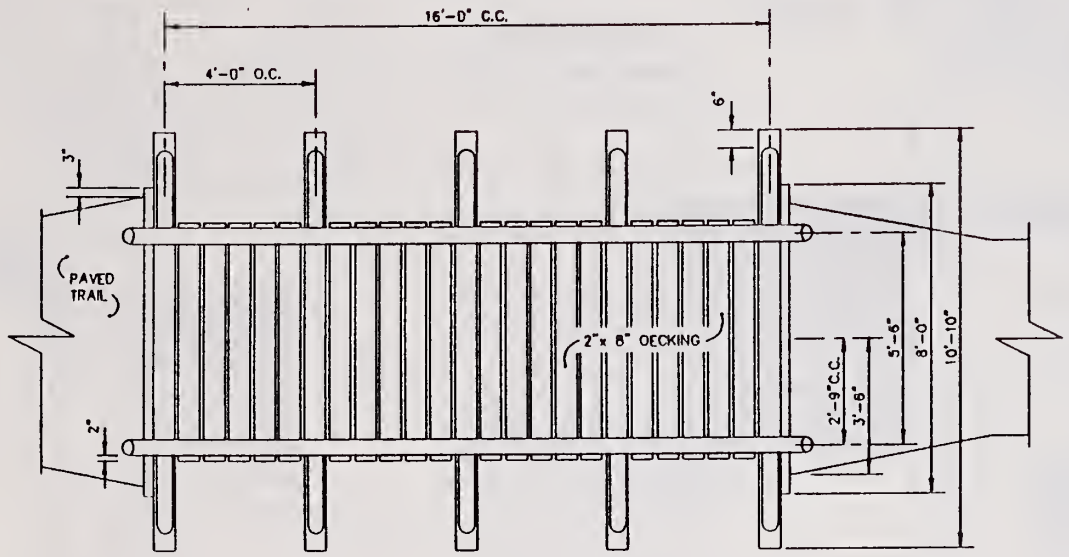
ELEVATION

0 1' 2' 3'
1/2"



END VIEW

0 1' 2' 3'
1/2"



PLAN VIEW

0 1' 2' 3'
1/2"

GENERAL NOTES:

1. ALL NATIVE MATERIAL SHALL BE SOUND AND FREE OF ROT AND OTHER DEFECT.
2. RAILINGS, POSTS, SUPPORTS AND CURBS SHALL BE CEDAR AND LEFT IN NATURAL COLOR.
   DECKING SHALL BE OF PRESSURE TREATED DOUG. FIR WITH DSMOSE-K-33, PRESERVATIVE TO .25 RETENTION.
   MUD SILLS & STRINGERS SHALL BE DOUG FIR PRESSURE TREATED WITH OSMORE K-33 PRESERVATIVE TO .60 RETENTION.
3. ALL HARDWARE TO BE HOT-DIPPED GALVANIZED AND WELL SEATED. HEADS OF NAILS, SPIKES AND LAG BOLTS SHALL BE RECESSED OR FLUSH WITH SURFACE OF WOOD.
4. EXPOSED ENDS OF ALL RUSTIC MATERIAL TO BE CHAMFERED FOR RUSTIC APPEARANCE
5. FINISHED ELEVATION OF BRIDGE DECKING SHALL MATCH FINISHED ELEVATION OF PAVEMENT WITH MAX. SURFACE SLOPE OF 3%

IMPORTANT NOTE

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FOOT BRIDGE

LDBR 8001 10-25-88

0 1' 2' 3'
1/2"

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THE PACIFIC NORTHWEST REGION

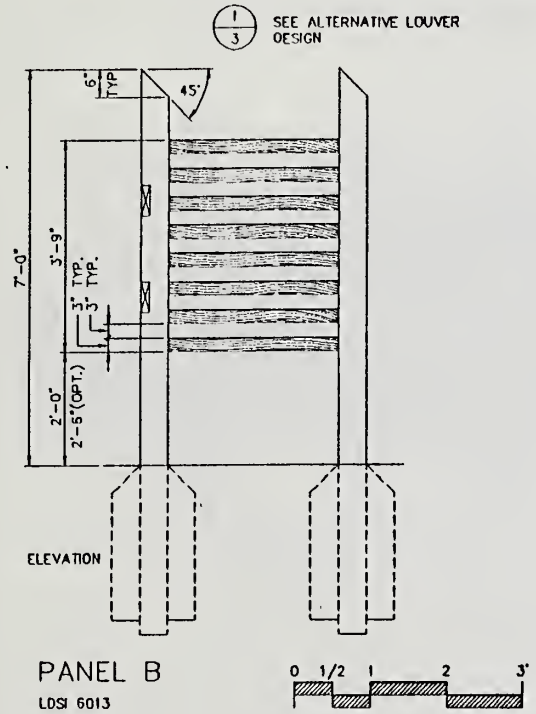
DRAWN DATE 10-25-88
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

FOOT BRIDGE

REC00020

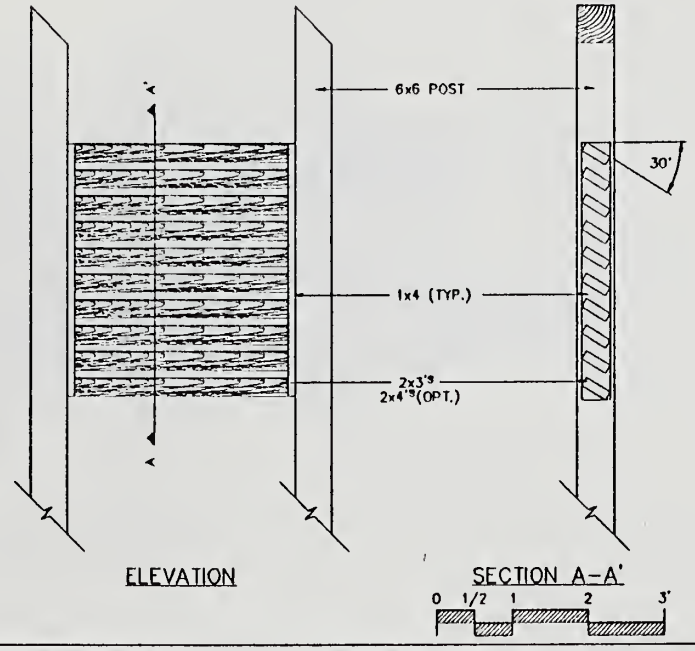
SHT. 1 OF 1

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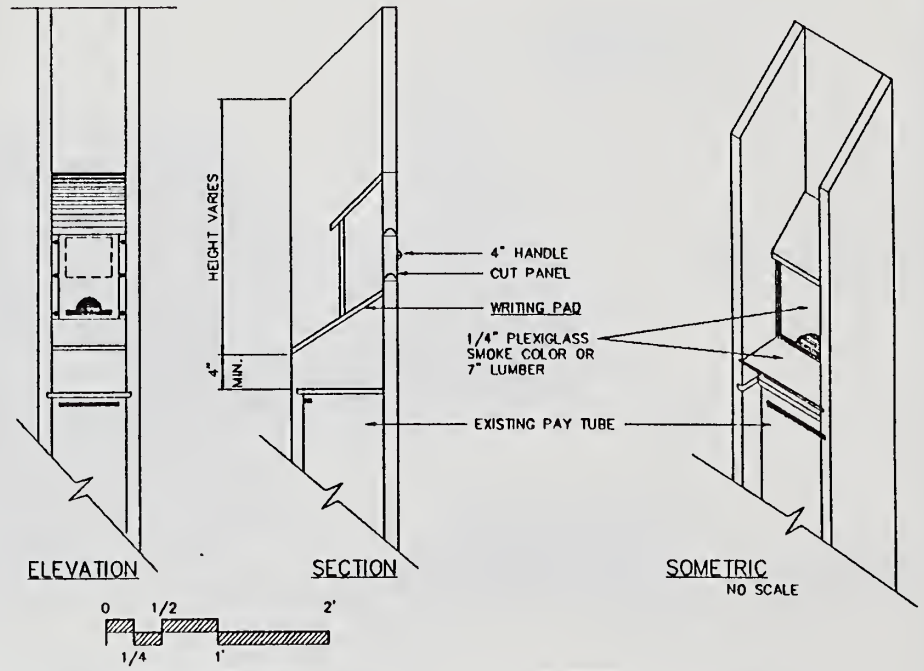


PANEL B

LDSI 6013

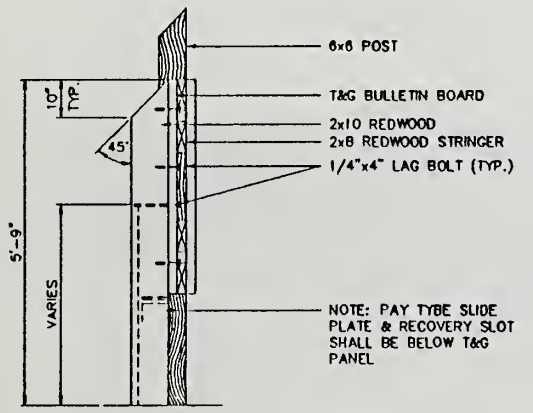


1 | OPTIONAL LOUVER DESIGN



2 | ENVELOPE BOX/OPTIONAL

LDSI 6014

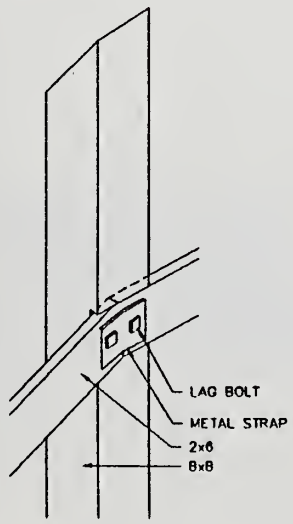


SECTION B-B'

LDSI 6015

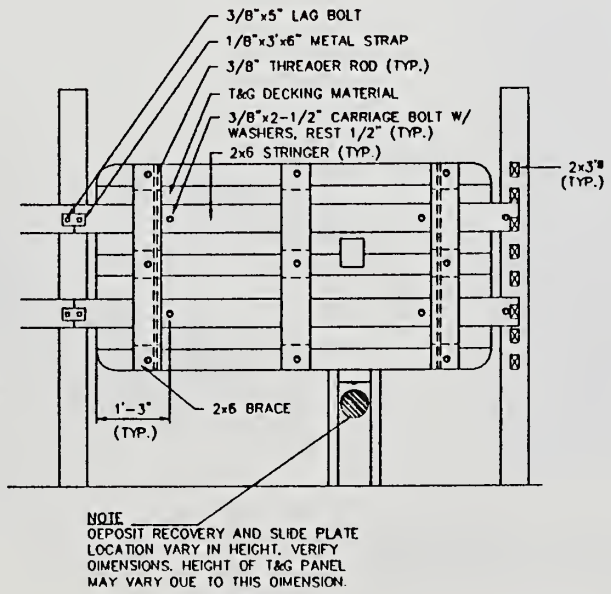
0 1/2 1 2 3'

• PLAN & ELEVATION FOR THESE DETAILS ARE ON RECREATION SHEET NUMBER: REC.00018 LDSI 6012



ISOMETRIC

NO SCALE

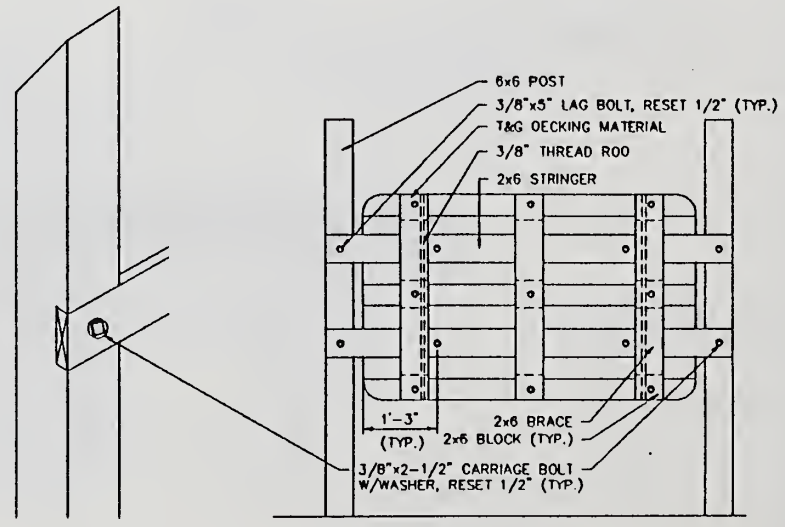


ELEVATION

3 | STRINGER ATTACHMENT DETAIL SCALE 3/4"= 1'-0"

LDSI 6016

0 1/2 1 2



ISOMETRIC

ELEVATION

0 1/2 1 2

4 | STRINGER ATTACHMENT DETAIL SCALE 3/4"=1'-0"

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

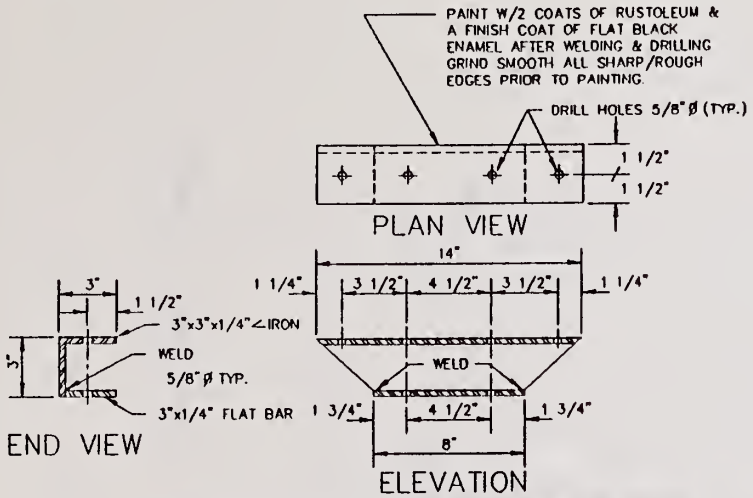
THE PACIFIC NORTHWEST REGION

DRAWN	R.F.	DATE 10-13-88
DESIGNED		DATE
CHECKED		DATE
REVIEWED		DATE

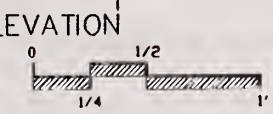
BULLETIN BOARD DETAILS

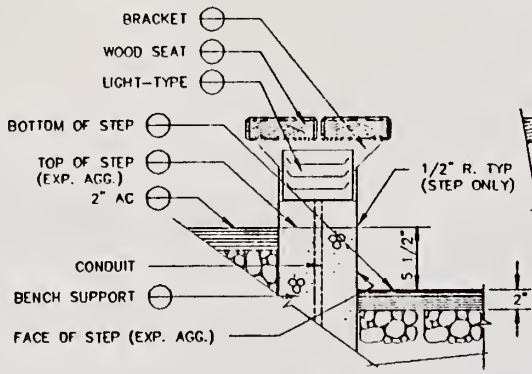
REC-519

SHT. 1 OF 1

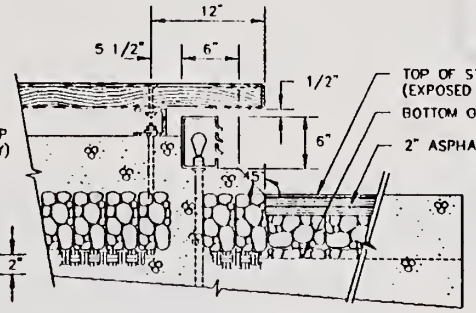


SEAT BRACKET
LDBE 6008 11-3-88





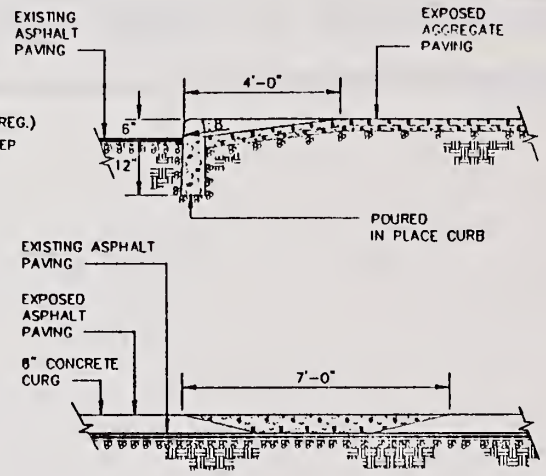
END VIEW (AISLE)

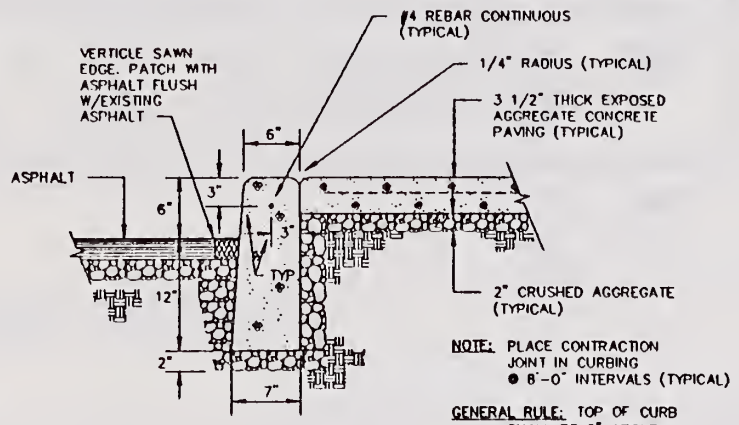


ELEV./SECT. VIEW @ AISLE

LIGHTING
LDLT6001 11-3-88





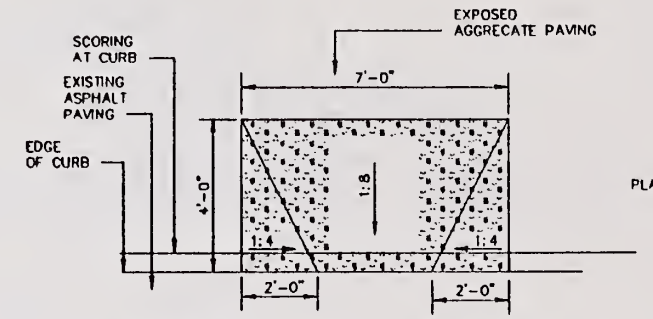


NOTE: PLACE CONTRACTION JOINT IN CURBING @ 8'-0" INTERVALS (TYPICAL)

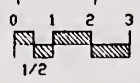
GENERAL RULE: TOP OF CURB SHALL BE 6" ABOVE ASPHALT SURFACE.

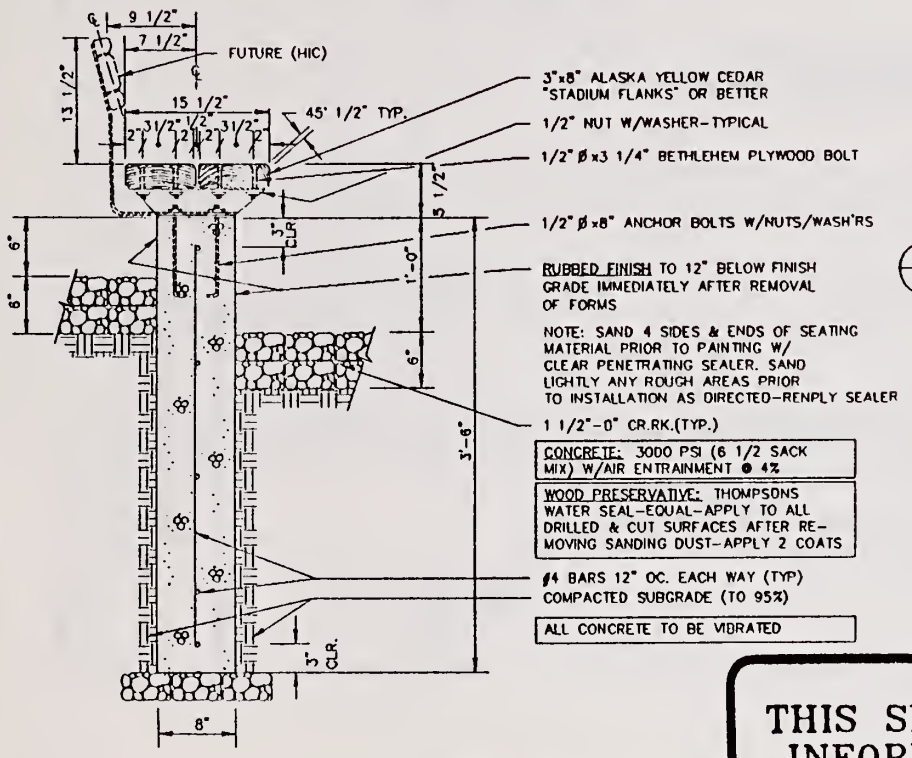
CONCRETE CURB (SECTION)
LDCB6001 11-3-88





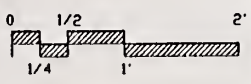
SIDEWALK RAMP
LDRP 6001 11-3-88

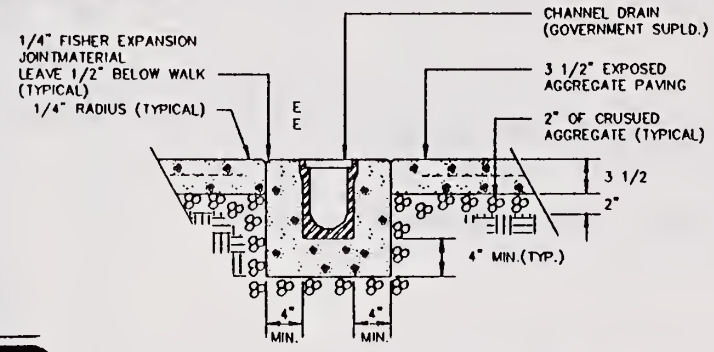


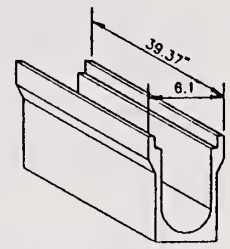


LDBE 6008	1=1
LDBE 6007	1=1
LDLT 6001	1=1
LDCB 6001	1=1
LDRP 6001	1=1
LDDR 6002	1=1

BENCH AND SUPPORT
LDBE 6007 11-3-88

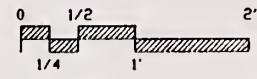






PERSPECTIVE VIEW
NO SCALE

CHANNEL DRAIN
F 23 LDDR 6002 11-3-88



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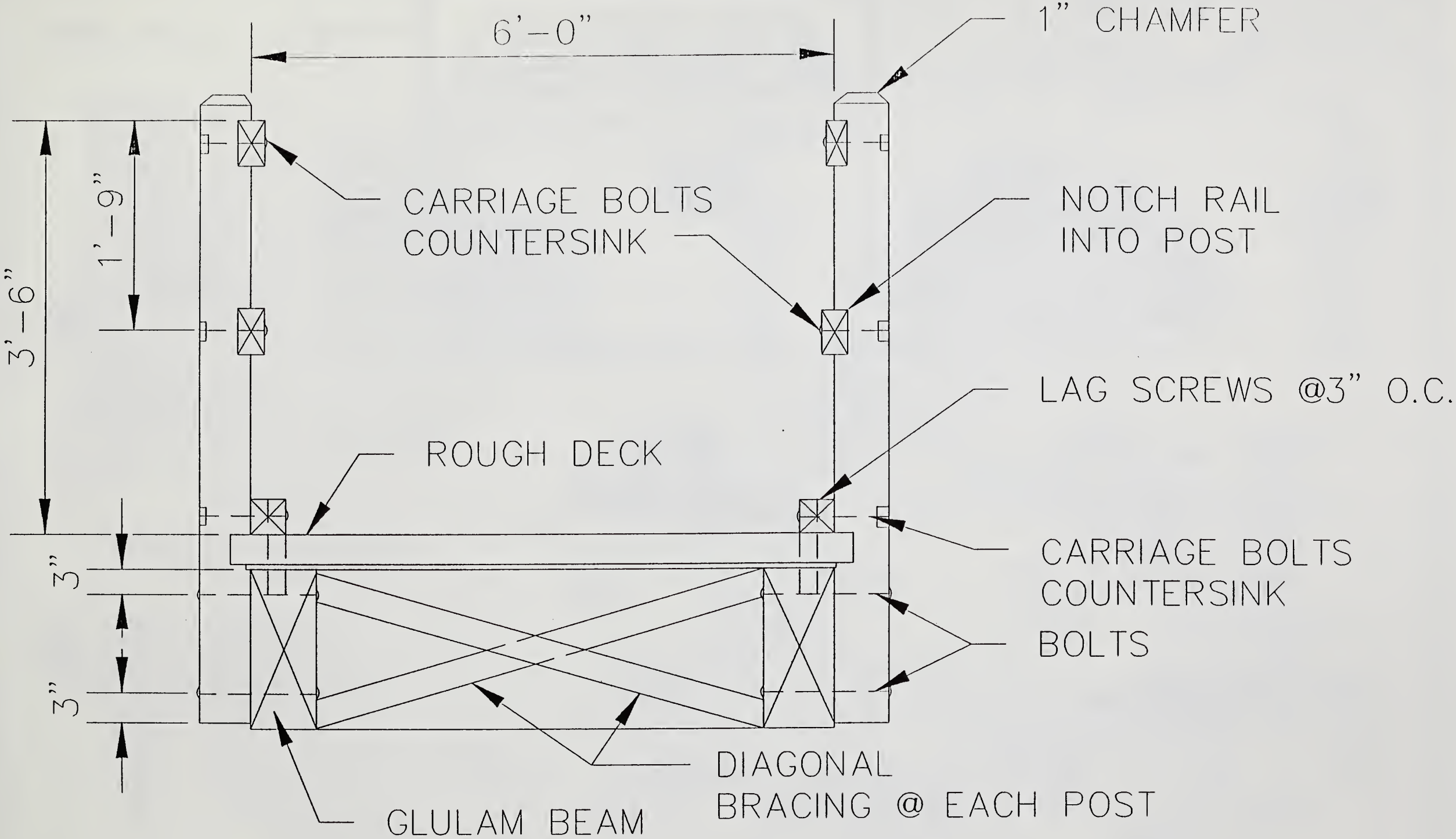
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

DRAWN DATE 11-1-88
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

CURB, SIDEWALK RAMP, BENCH, LIGHTING & CHANNEL DRAIN

REC00023

SHT. 1
OF 1



SECTION

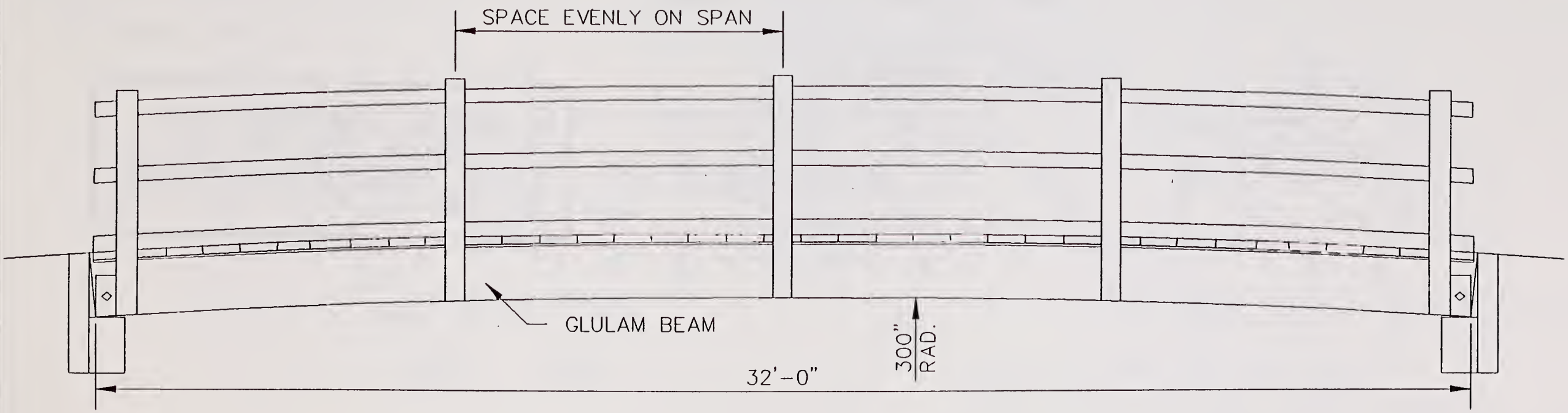
LDBR 6006 11-3-88

0 1 2 3

1"

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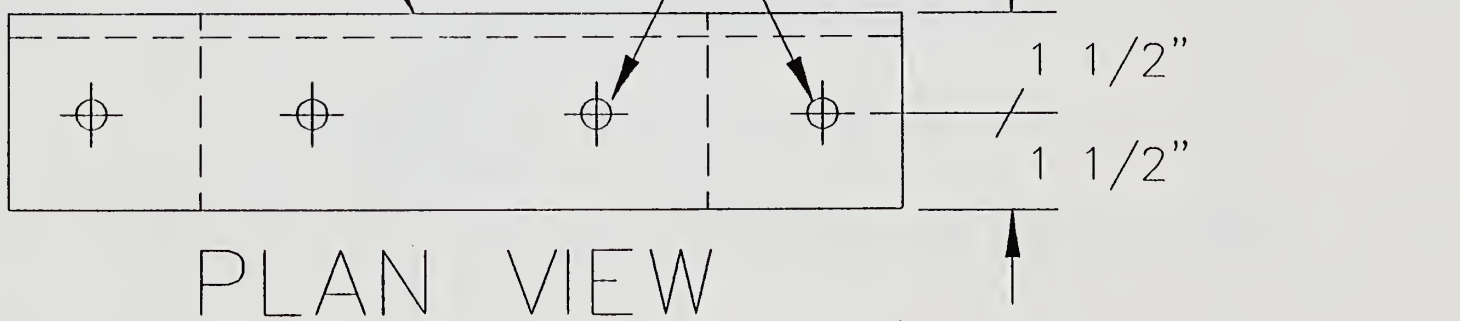


ELEVATION

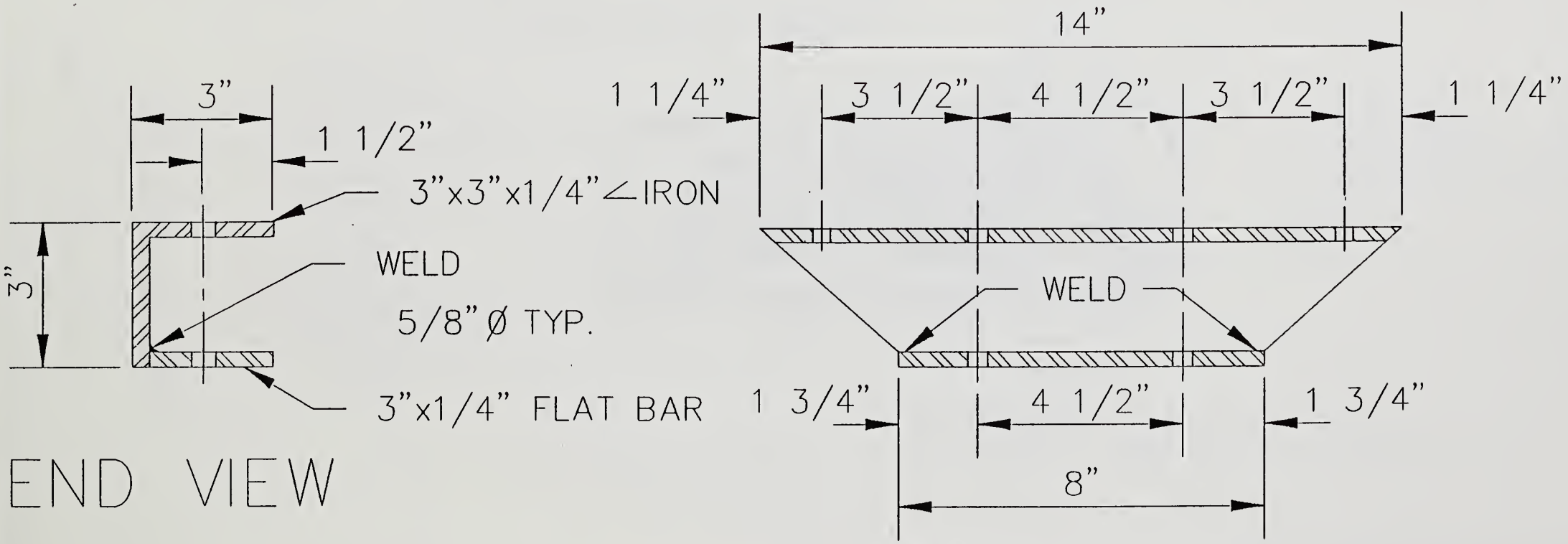
LDBR 6005 11-3-88

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PAINT W/2 COATS OF RUSTOL & A FINISH COAT OF FLAT BLACK ENAMEL AFTER WELDING & DRILLING GRIND SMOOTH ALL SHARP/ROUGH EDGES PRIOR TO PAINTING.



PLAN VIEW

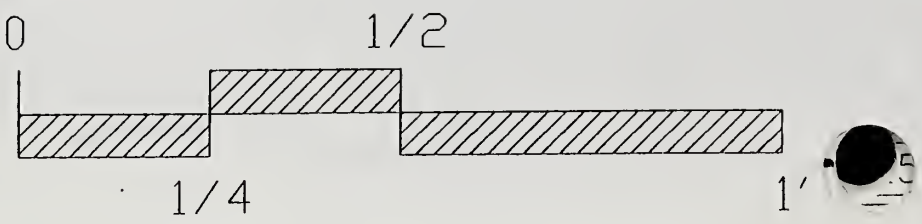


END VIEW

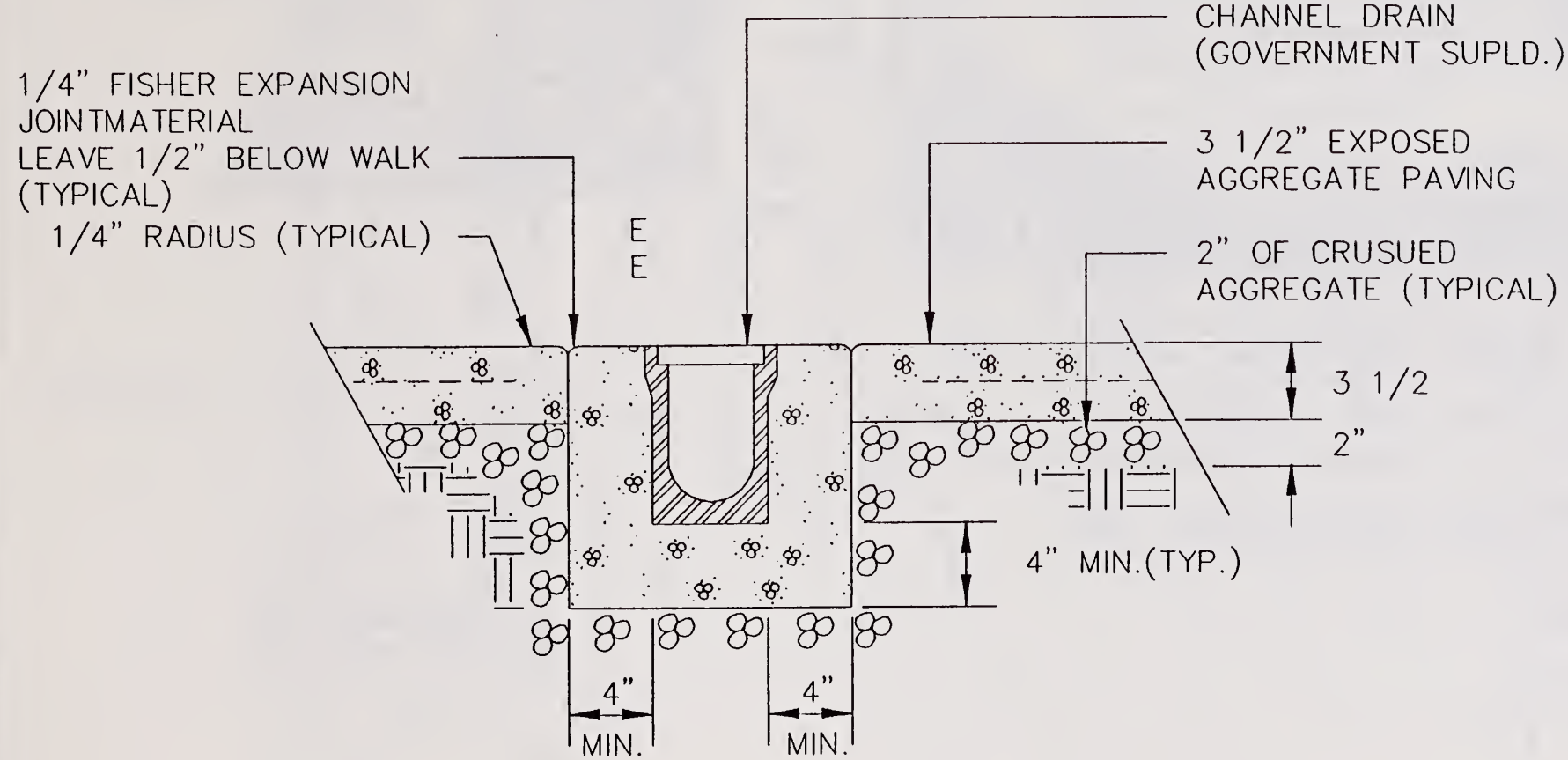
ELEVATION

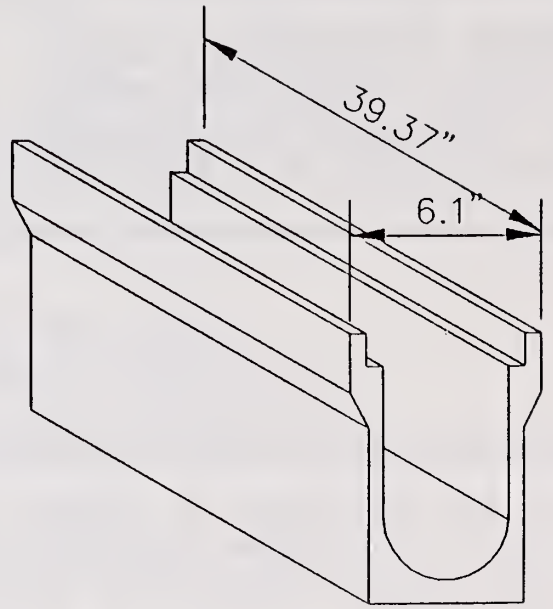
SEAT BRACKET

LDBE 6008 11-3-88



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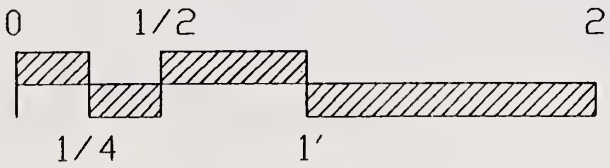


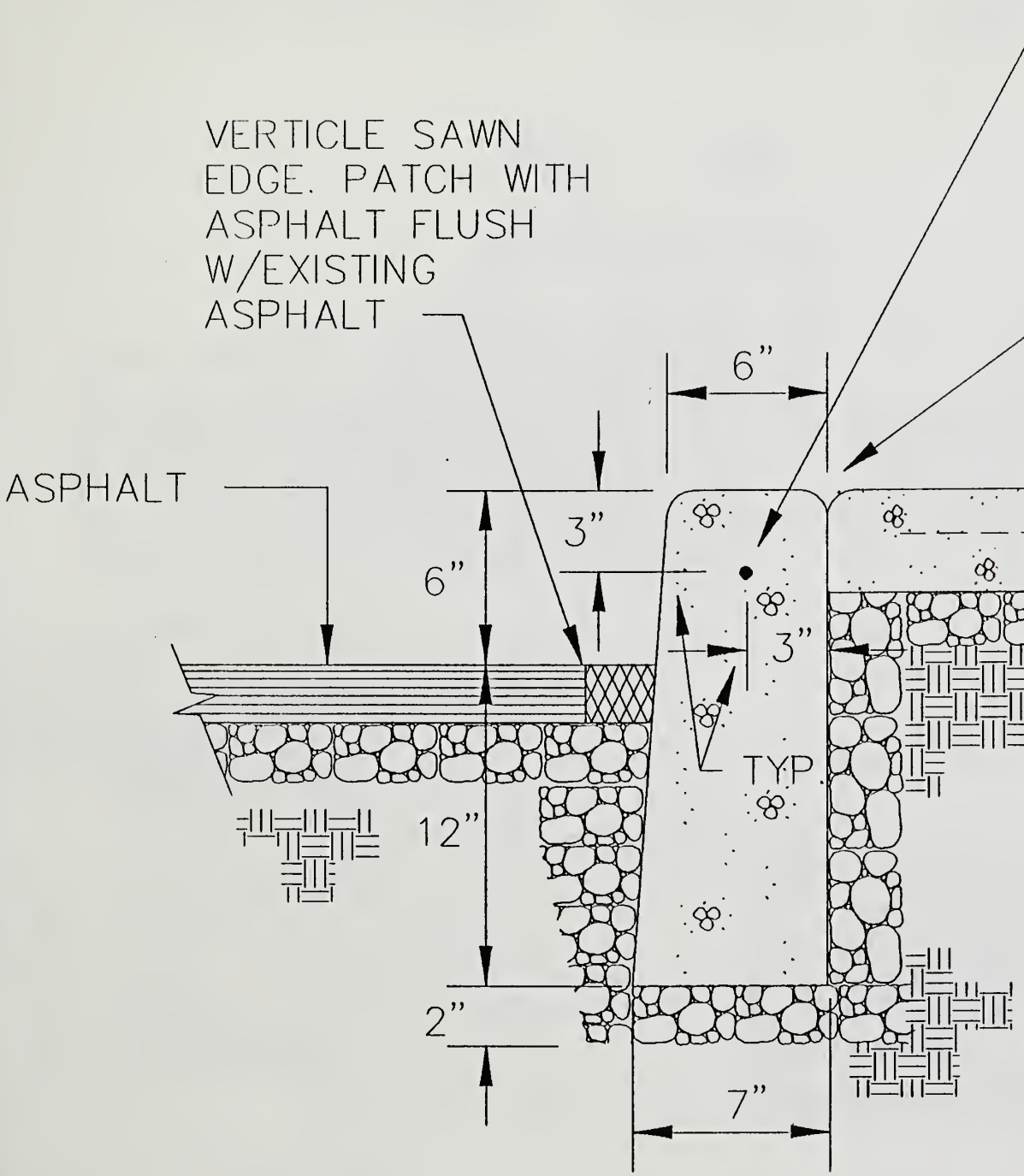
PERSPECTIVE VIEW
NO SCALE

F
23

CHANNEL DRAIN

LDDR 6002 11-3-88





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2" CRUSHED AGGREGATE
(TYPICAL)

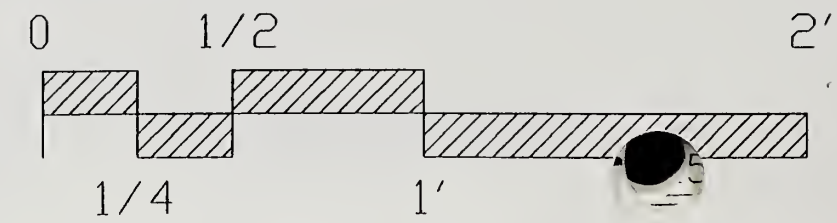
NOTE: PLACE CONTRACTION
JOINT IN CURBING
@ 8'-0" INTERVALS (TYPICAL)

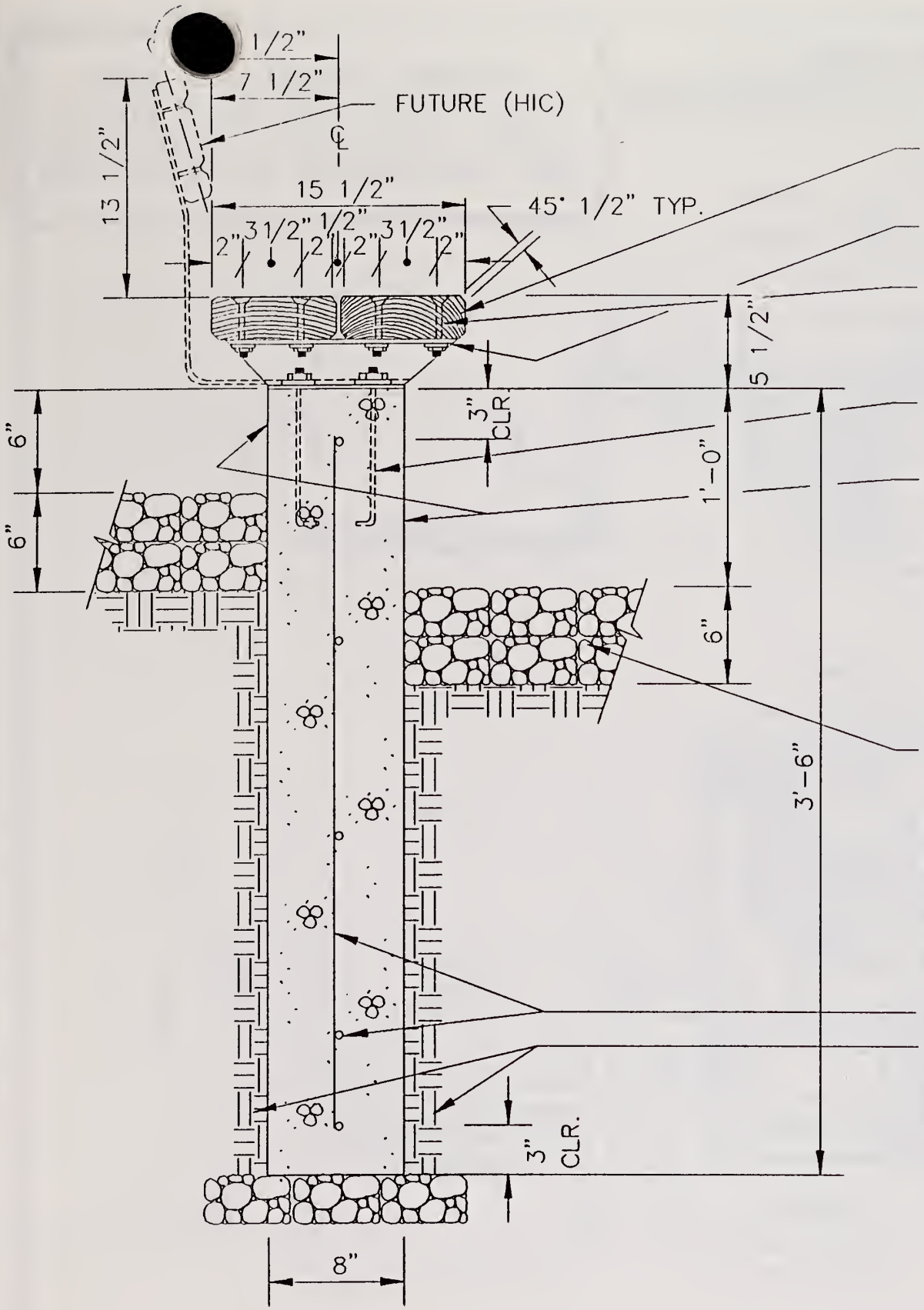
GENERAL RULE: TOP OF CURB
SHALL BE 6" ABOVE
ASPHALT SURFACE.

A

CONCRETE CURB (SECTION)

LDCB6001 11-3-88





3"x8" ALASKA YELLOW CEDAR "STADIUM FLANKS" OR BETTER

1/2" NUT W/WASHER-TYPICAL

1/2" Ø x3 1/4" BETHLEHEM PLYWOOD BOLT

1/2" Ø x8" ANCHOR BOLTS W/NUTS/WASH'RS

RUBBED FINISH TO 12" BELOW FINISH GRADE IMMEDIATELY AFTER REMOVAL OF FORMS

NOTE: SAND 4 SIDES & ENDS OF SEATING MATERIAL PRIOR TO PAINTING W/ CLEAR PENETRATING SEALER. SAND LIGHTLY ANY ROUGH AREAS PRIOR TO INSTALLATION AS DIRECTED-RENPLY SEALER

1 1/2"-0" CR.RK.(TYP.)

CONCRETE: 3000 PSI (6 1/2 SACK MIX) W/AIR ENTRAINMENT @ 4%

WOOD PRESERVATIVE: THOMPSONS WATER SEAL-EQUAL-APPLY TO ALL DRILLED & CUT SURFACES AFTER RE-MOVING SANDING DUST-APPLY 2 COATS

#4 BARS 12" OC. EACH WAY (TYP)

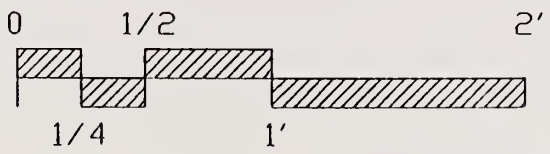
COMPACTED SUBGRADE (TO 95%)

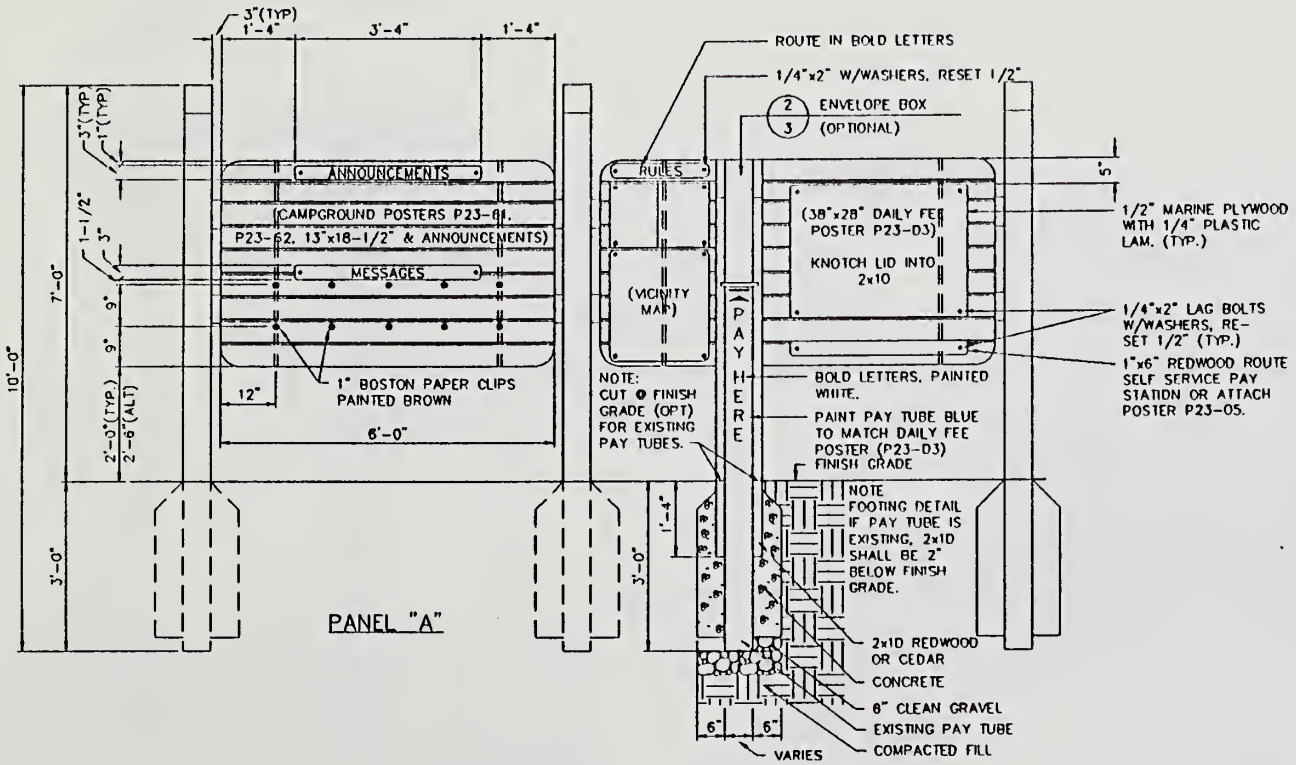
ALL CONCRETE TO BE VIBRATED

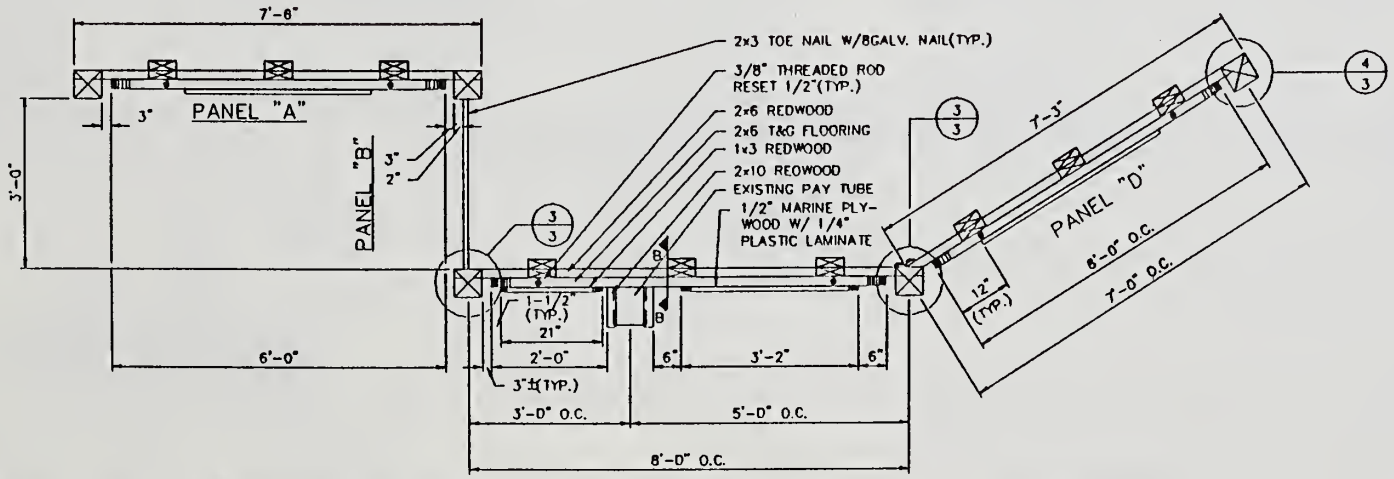
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BENCH AND SUPPORT

LDBE 6007 11-3-88







NOTES:

1. ALL T&G BULLETIN BOARDS HALL BE TREATED WITH WATER PEPELLENT WOOD PRESERVATIVE, I.E. LINSEED OIL-2 COATS.
2. ALL 6x6', 2x8' & 2x10' SHALL BE PRESSURE TREATED WOOD.
3. PAY TUBES VARY IN HEIGHT AND WIDTH; VERIFY DIMENSIONS IN FIELD.
4. SLIDE PLATE AND DEPOSIT RECOVERY OPENING VARY IN HEIGHT VERIFY IN LOCATION.
5. CONSTRUCT T&G DECKING WITH THE TONGUE FACING UP.
6. DEPTH OF FOOTING MAY VARY DEPENDING UPON DEPTH OF FROST LINE, MINIMUM DEPTH OF FOOTING 2'6".

DETAILS FOR THIS DRAWING ARE ON RECREATION SHEET NUMBER: REC00019:
ENVELOPE BOX LDSI 6014
PANEL "B" W/ OPTIONAL LOUVER DESIGN LDSI 6013
SECTION B-B LDSI 6015
STRINGER ATTACHMENT

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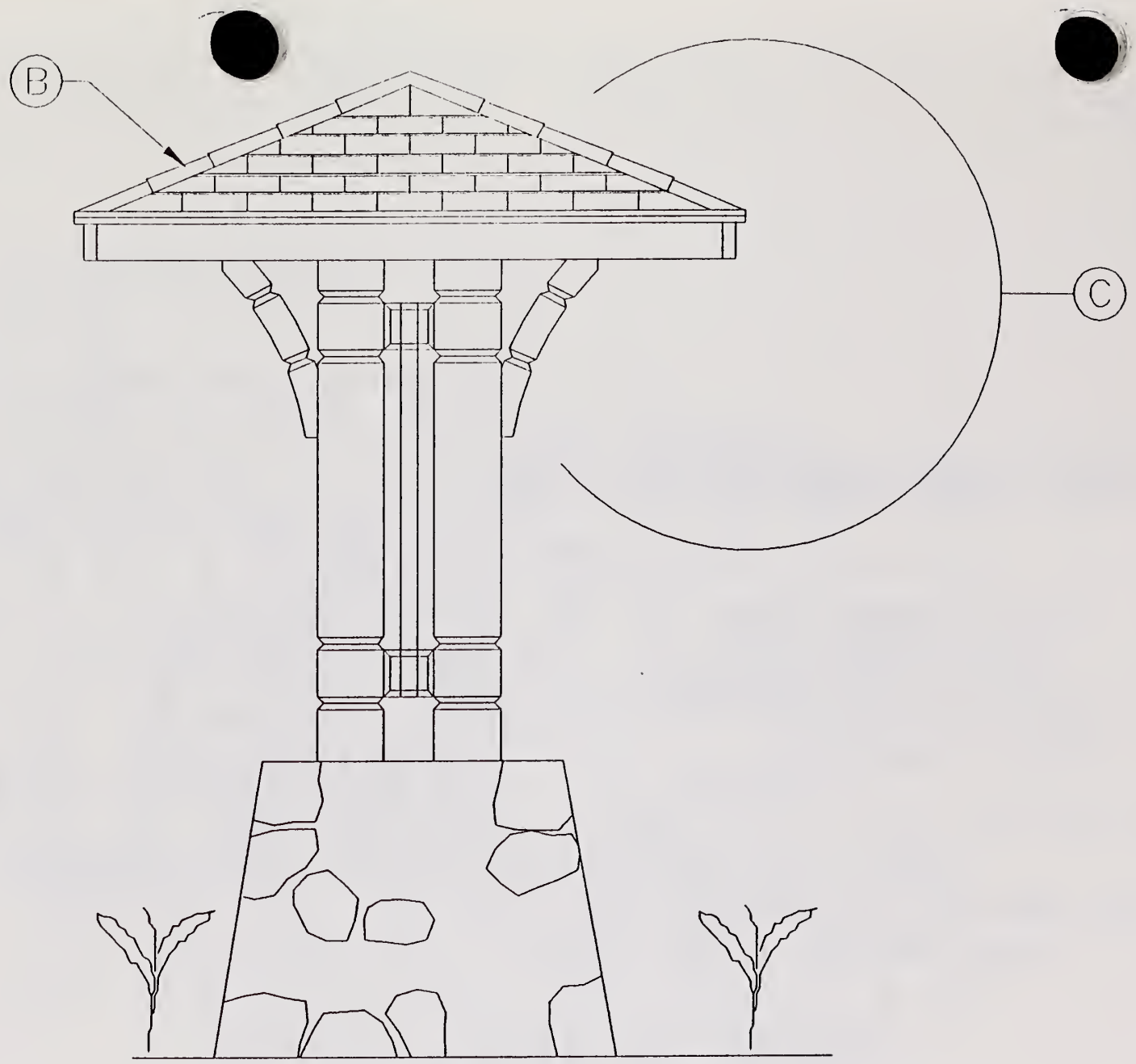
BULLITEN BOARD
LDSI 6012 Date

0 1/2 1 2 3'

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

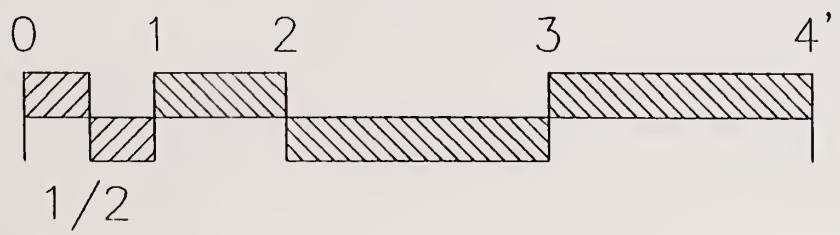
DRAWN	DATE	10-2-88
DESIGNED	DATE	
CHECKED	DATE	
REVIEWED	DATE	

BULLITEN BOARD
REC 8
SHT. 1
OF 1



SIDE ELEVATION

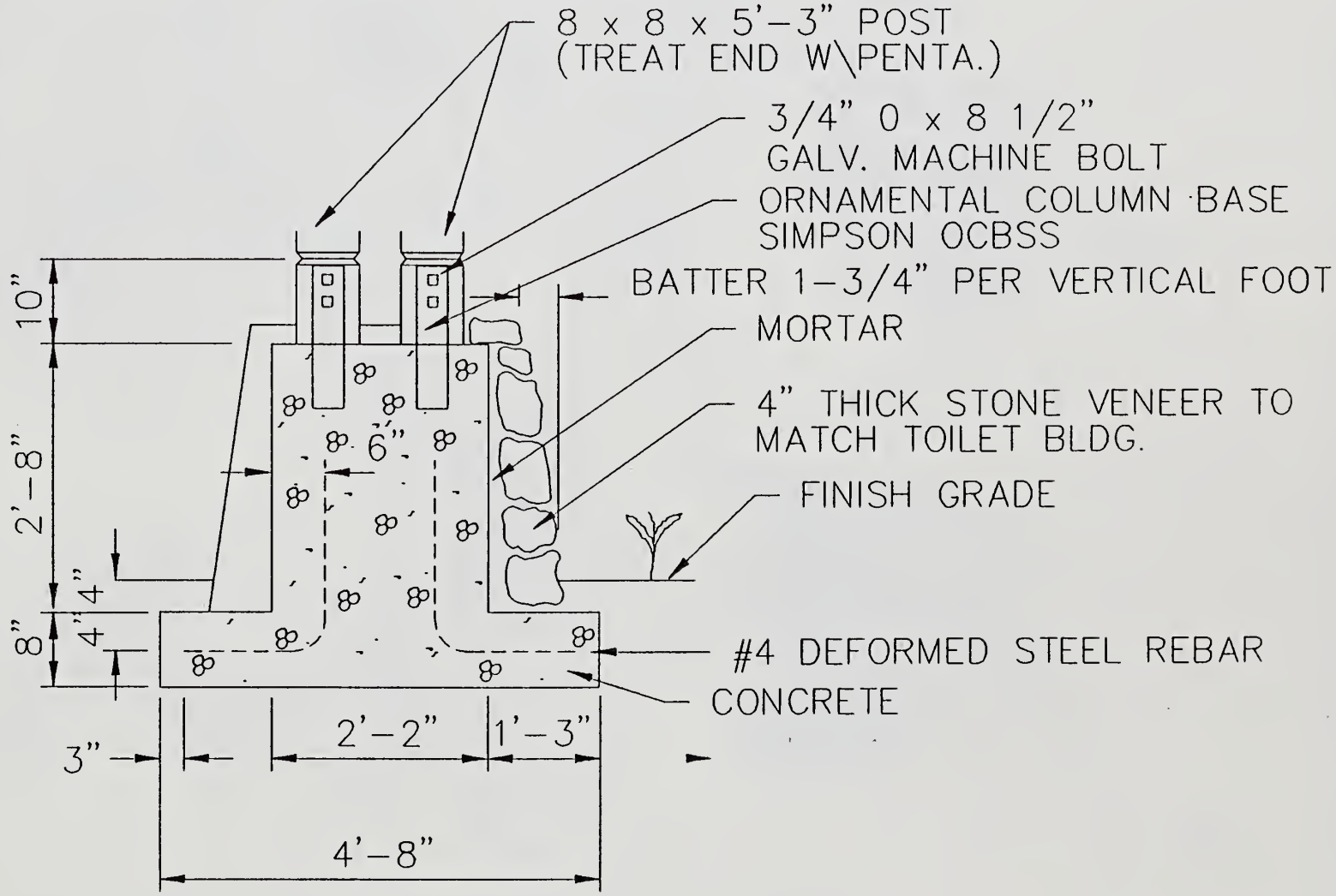
SCALE 1/2"=1'



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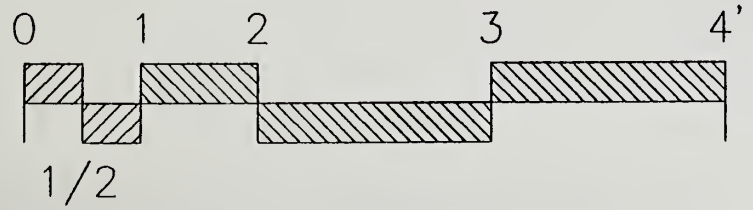
STREET

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G SECTION G

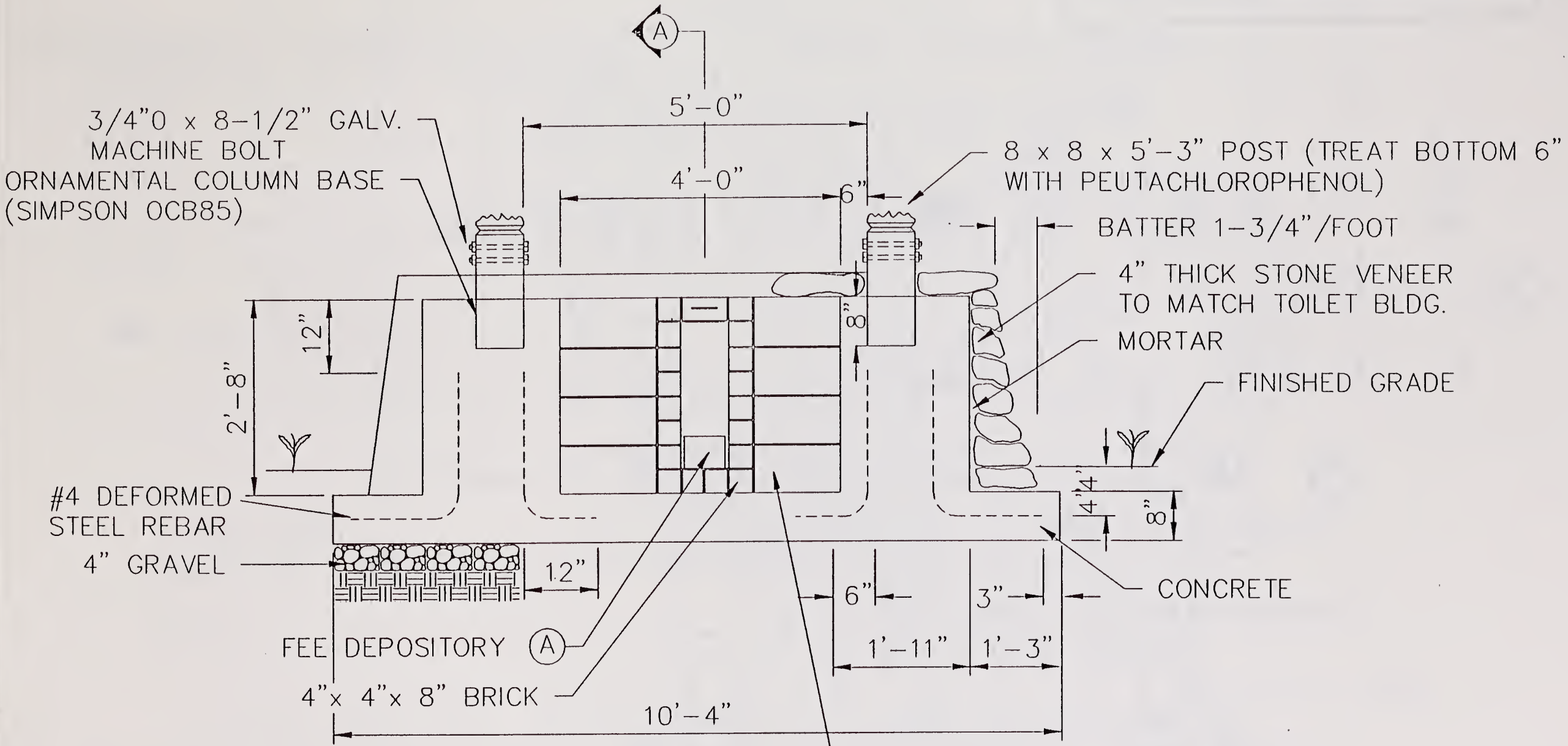
SCALE 1/2"=1'



BULLETIN BOARD/FEE DEPOSITORY

6011

CRILL



F SECTION F

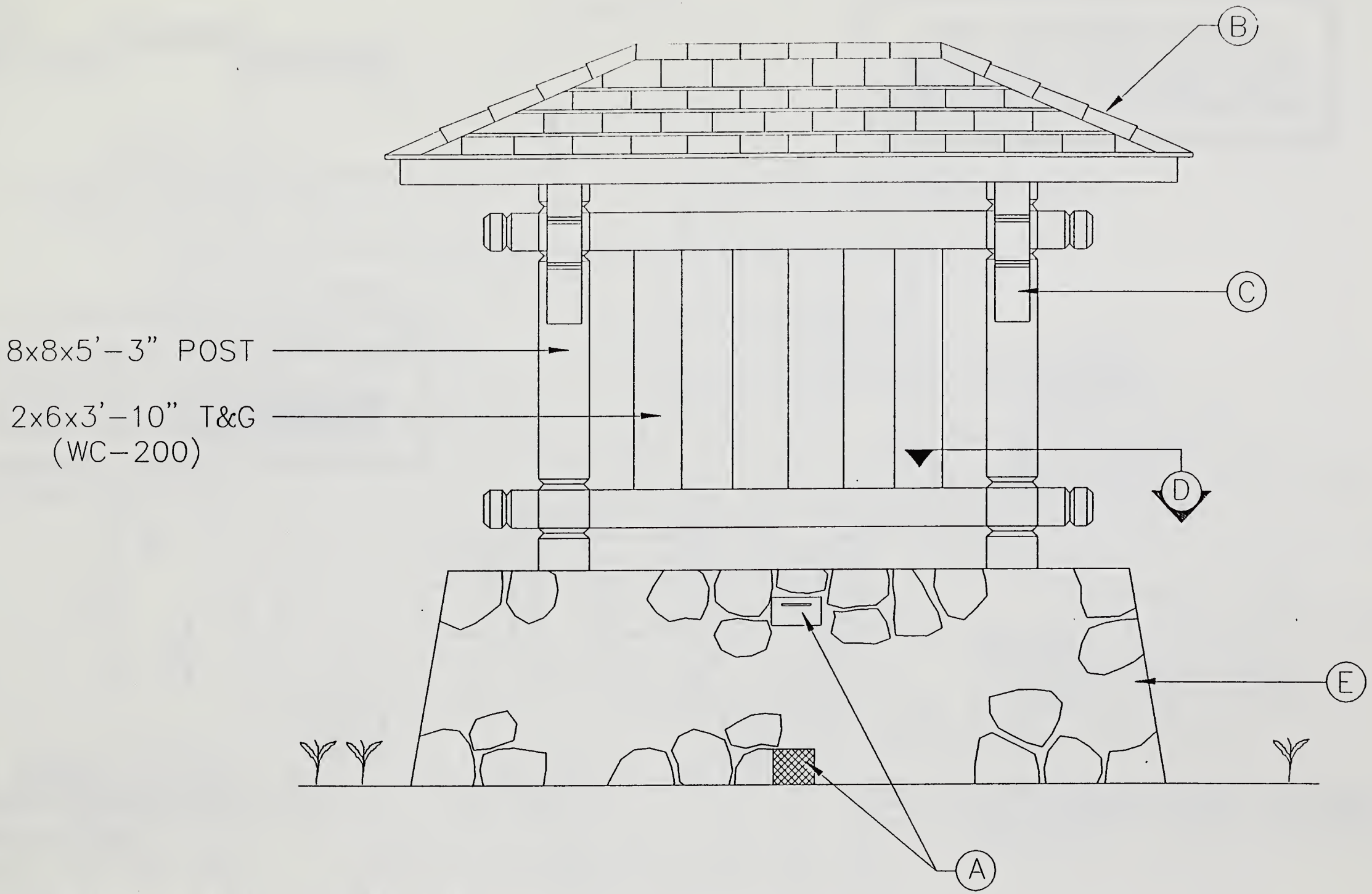
SCALE 1"=1'

0 1 2 3 4'

1/2

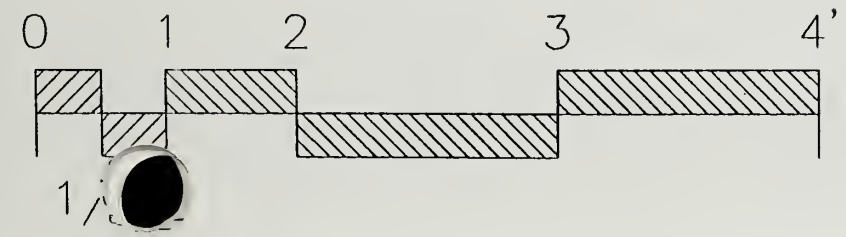
F Sec

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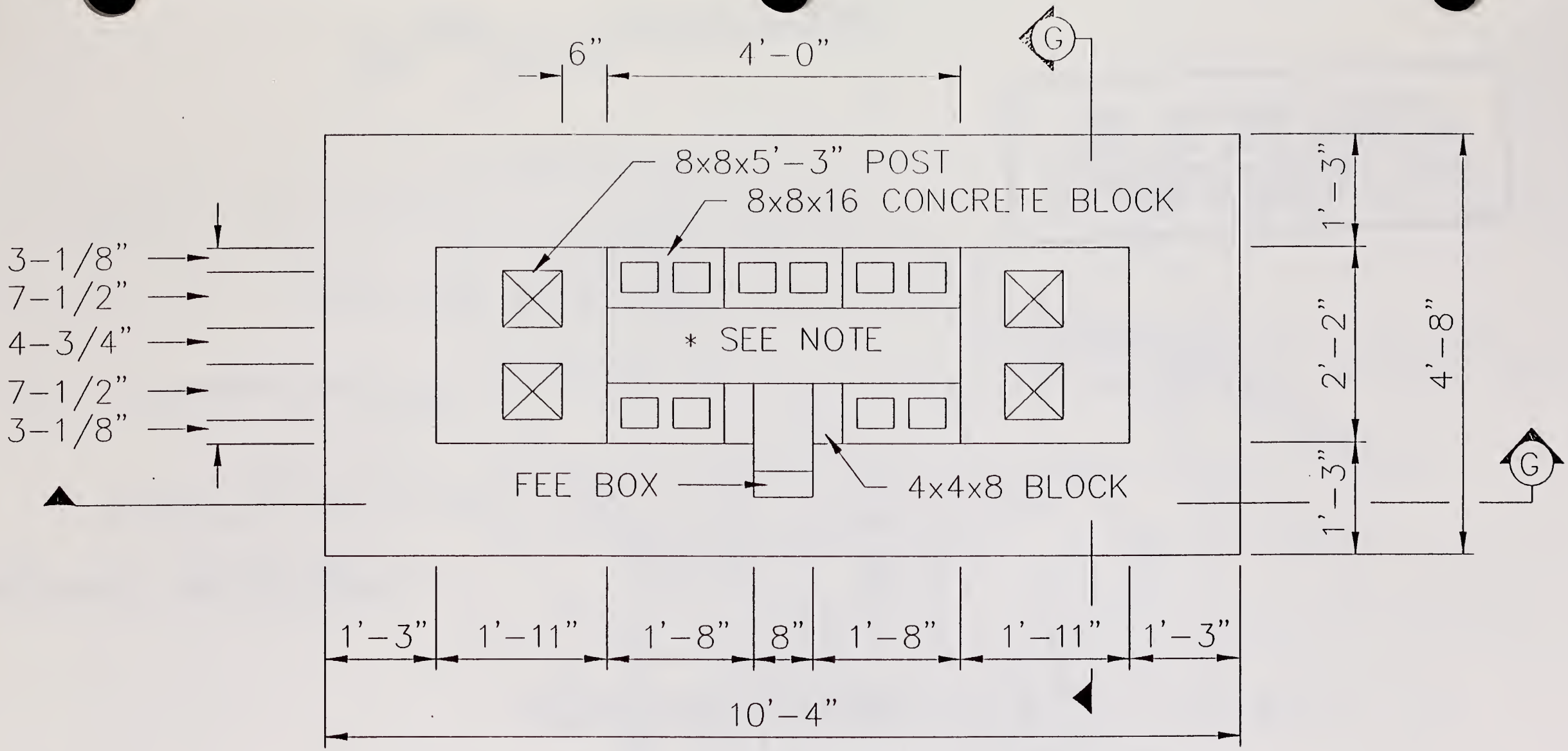
FRONT ELEVATION

SCALE 1/2"=1'



FELEV

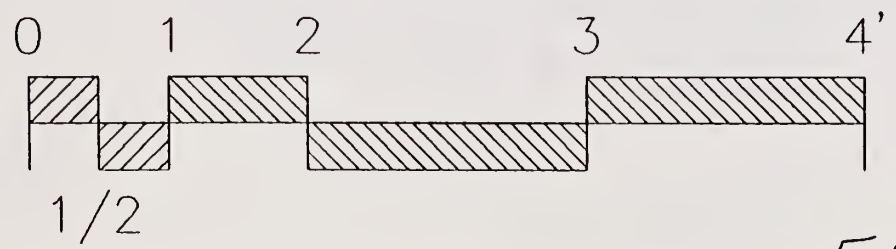
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* NOTE
FILL SPACE BETWEEN MASONRY
WALLS WITH RUBBLE

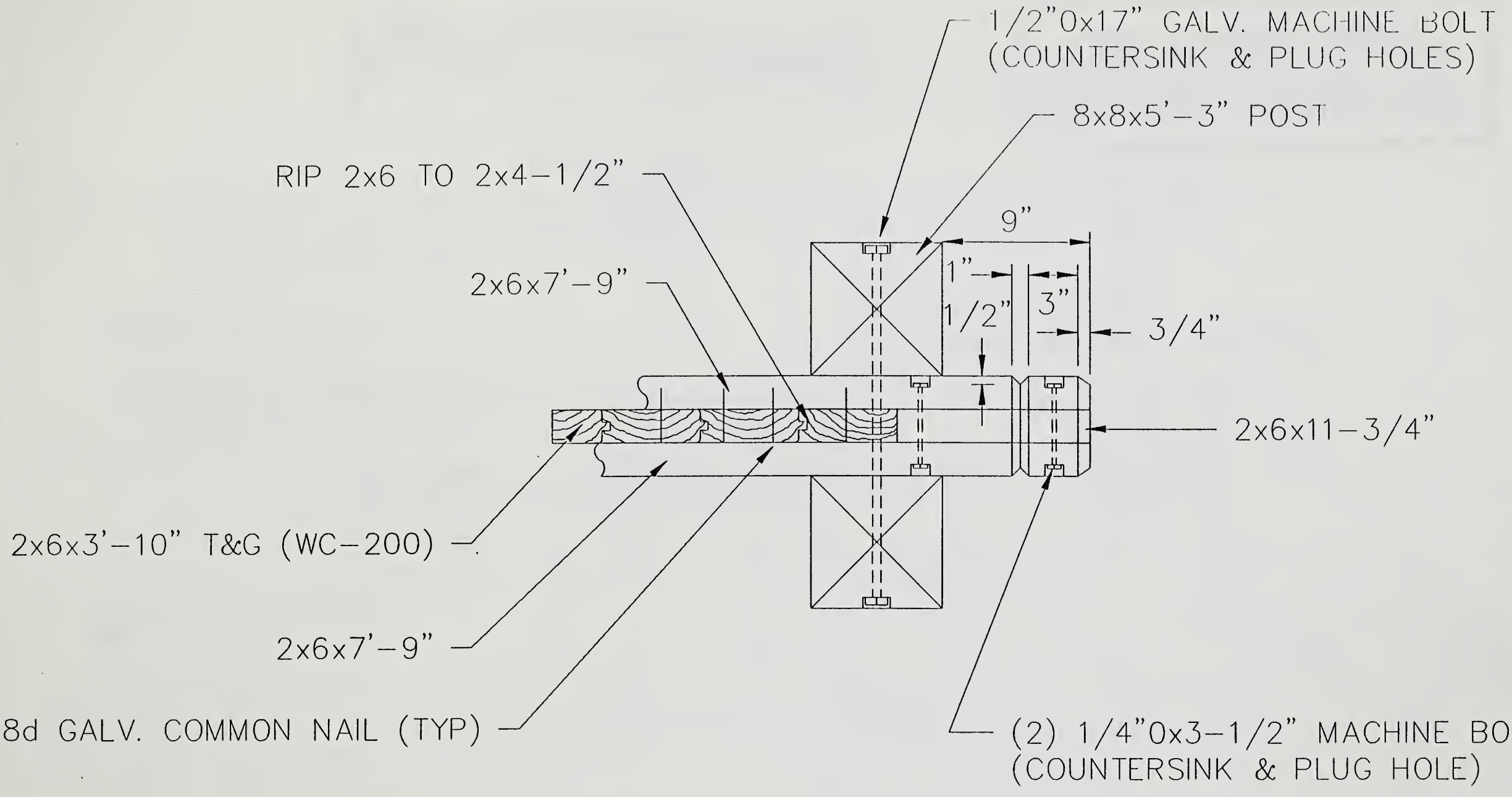
(E) CONCRETE BASE----PLAN VIEW

SCALE 1"=1'



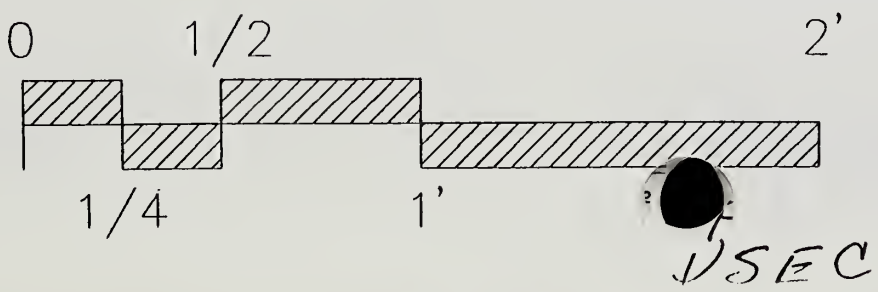
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E Con



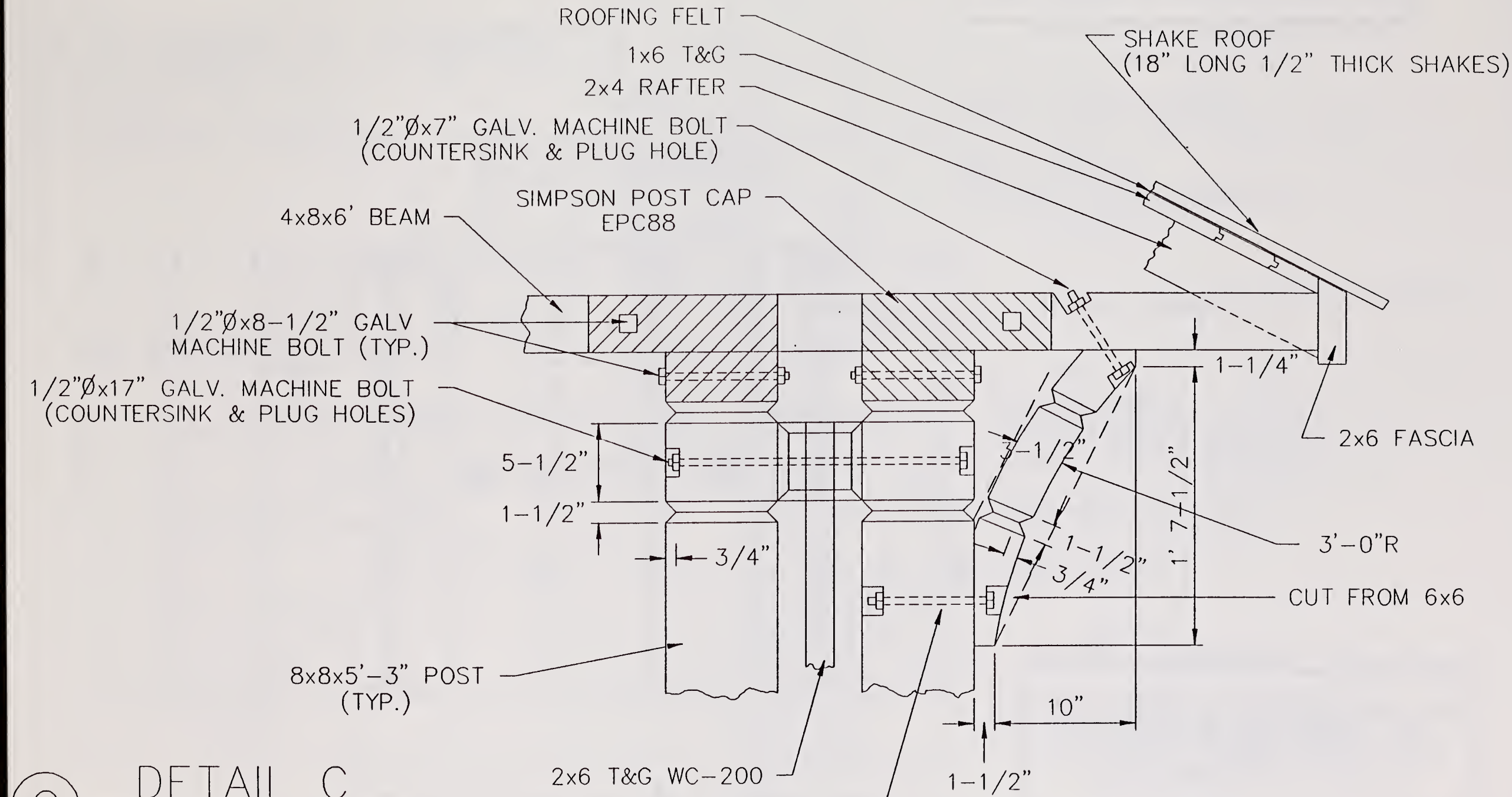
(D) SECTION D

SCALE 1-1/2"=1'



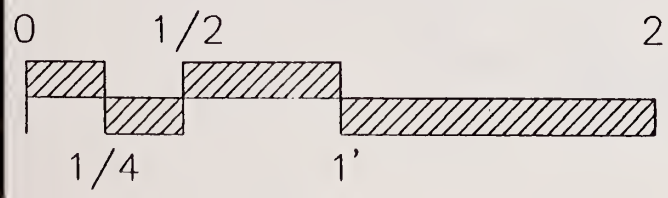
1 SEC

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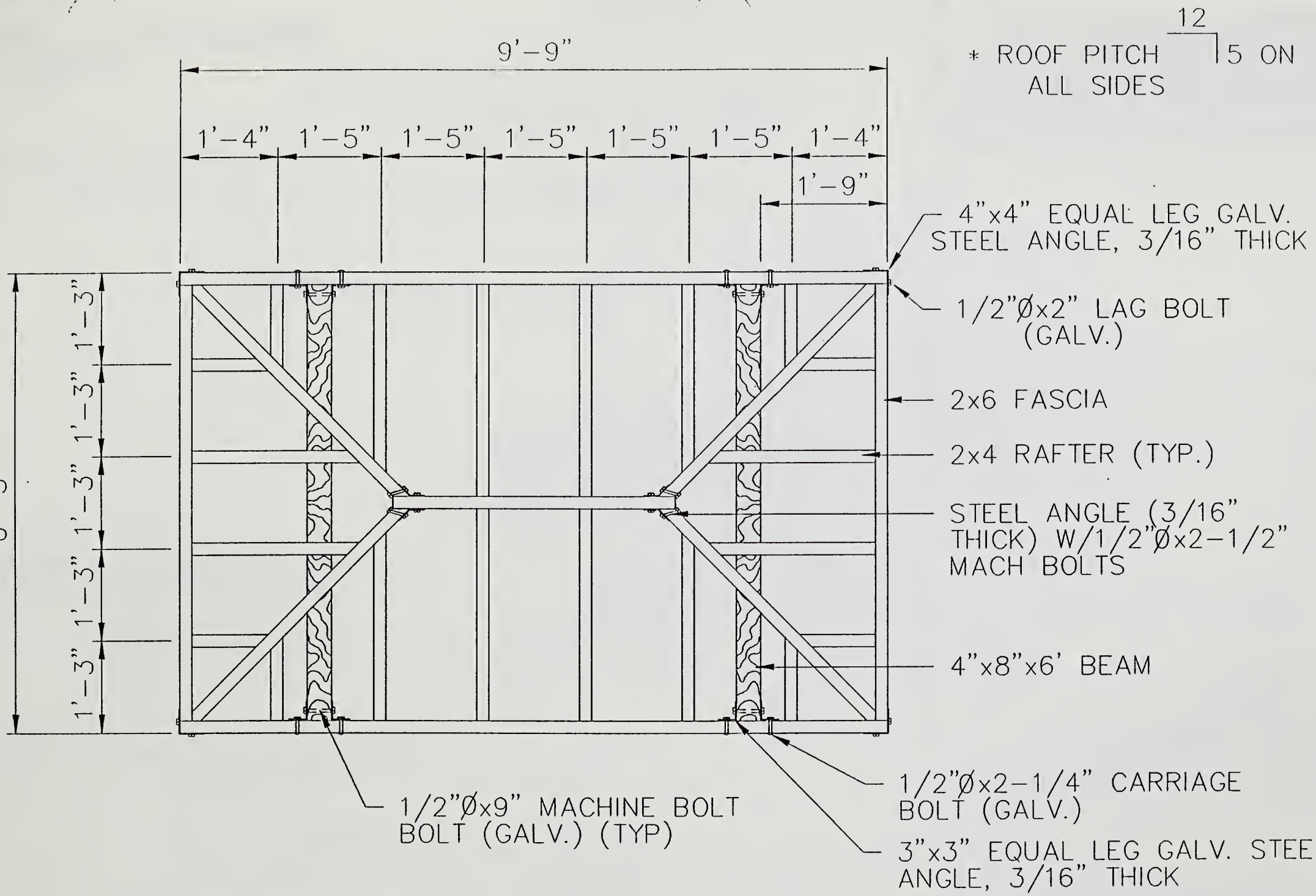


C DETAIL C

SCALE 1-1/2"=1'



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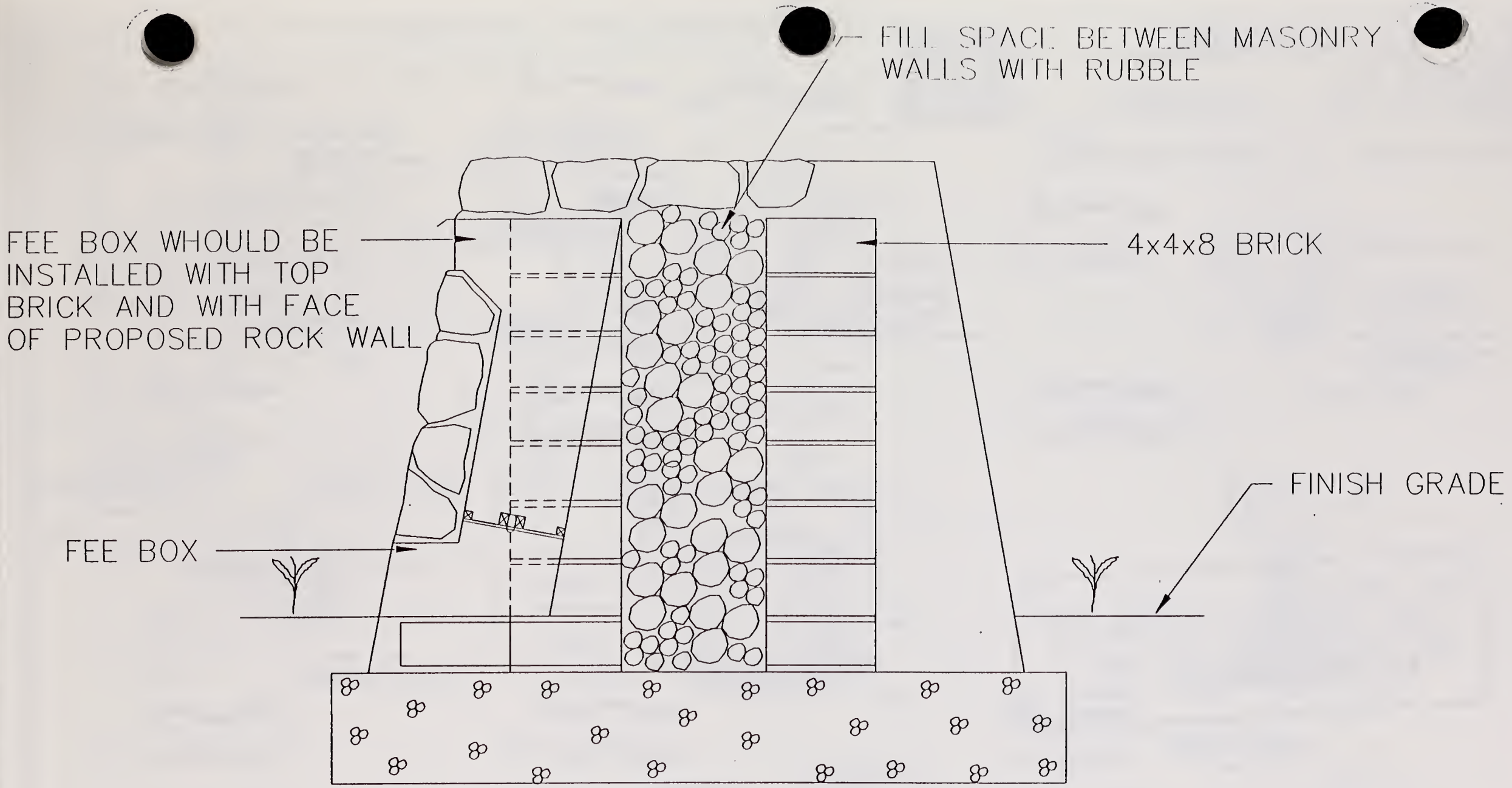
(B) ROOF FRAMING

SCALE 1/2"=1'

0 1 2 3 4'

BRoof.tif

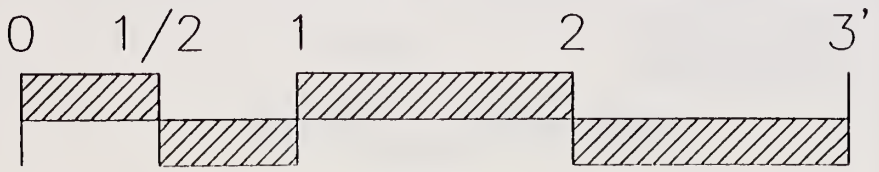
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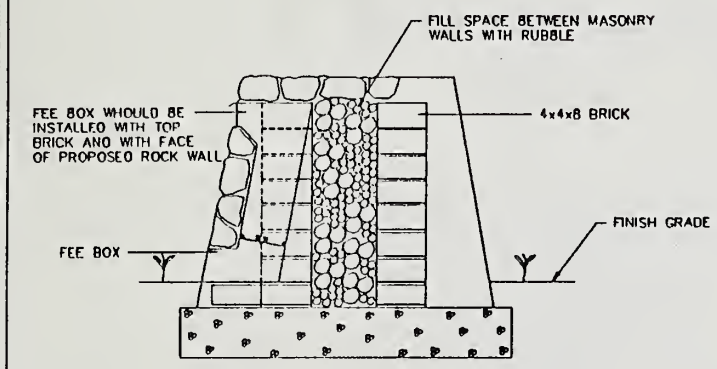
THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

A FEE DEPOSITORY

SCALE 1"=1'



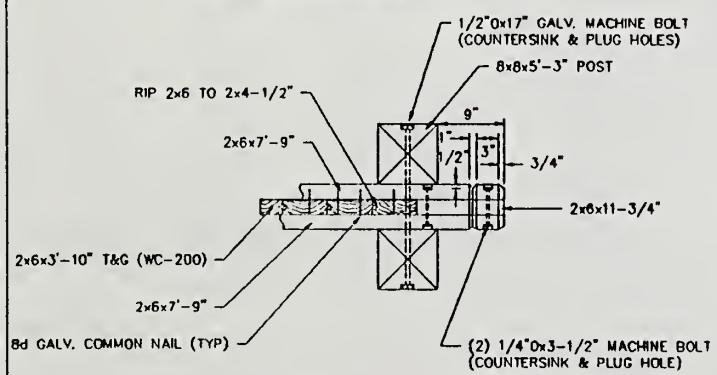
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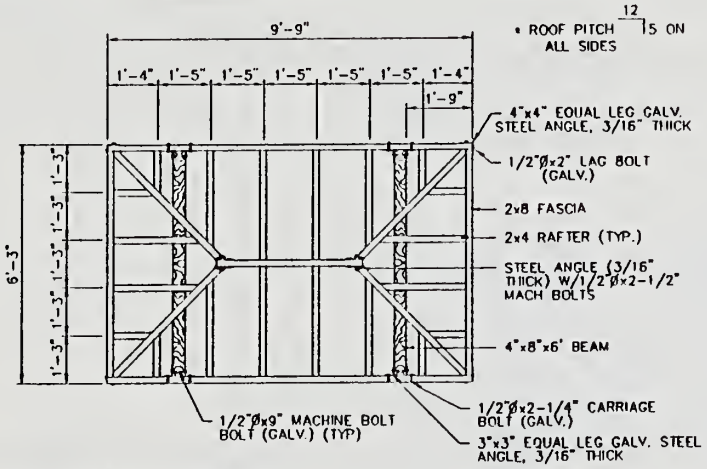


A FEE DEPOSITORY

SCALE 1"=1'

0 1/2 1 2 3'



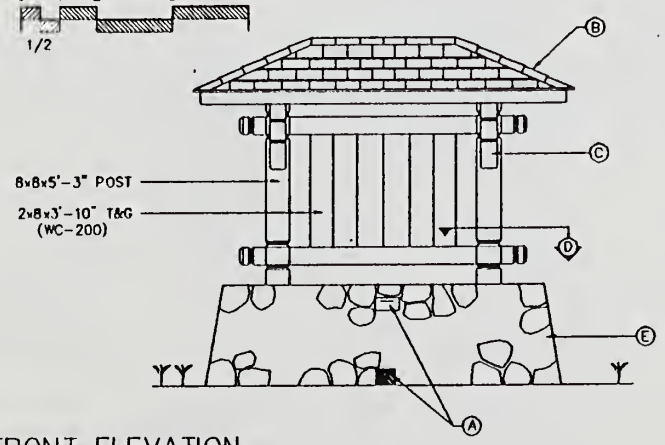


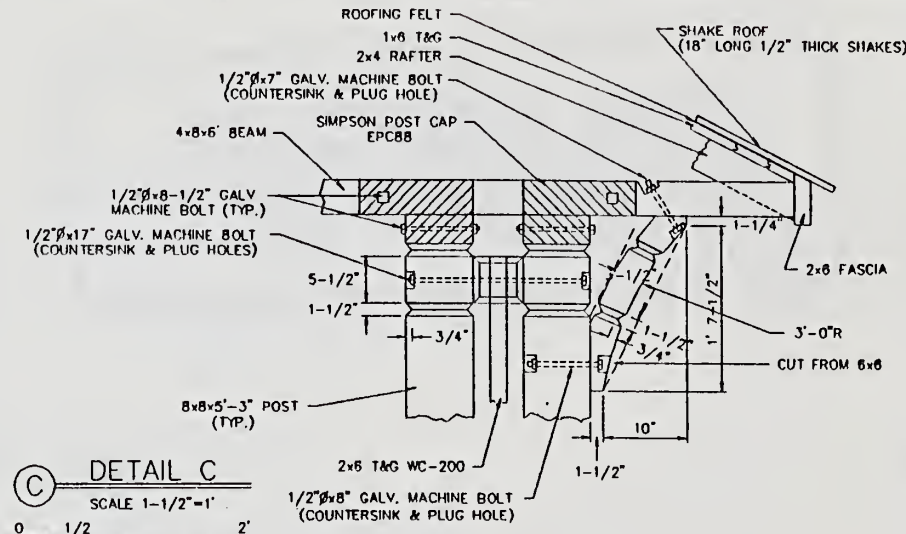
B ROOF FRAMING

SCALE 1/2"=1'

0 1 2 3 4'

1/2



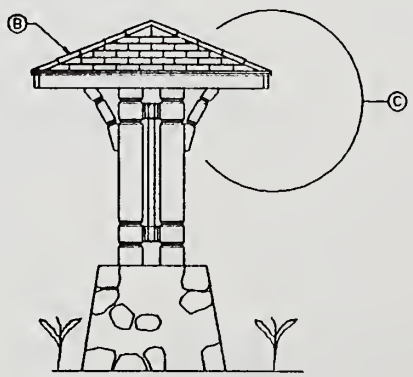


C DETAIL C

SCALE 1-1/2"=1'

0 1/2 2'

1/4 1'

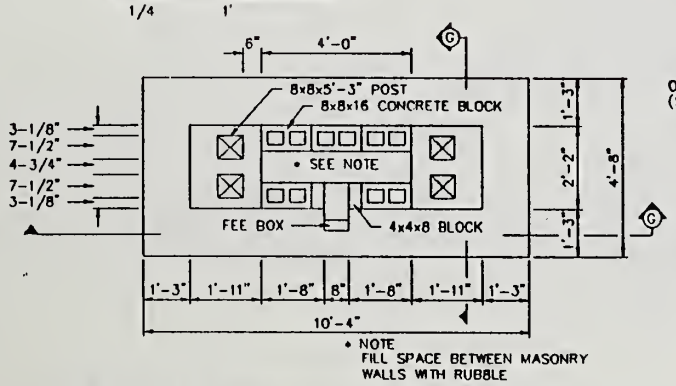


D SECTION D

SCALE 1-1/2"=1'

0 1/2 2'

1/4 1'



E CONCRETE BASE----PLAN VIEW

SCALE 1"=1'

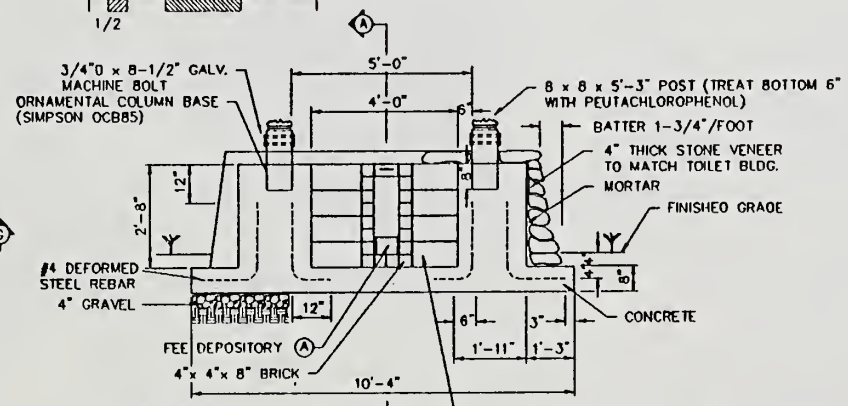
0 1 2 3 4'

FRONT ELEVATION

SCALE 1/2"=1'

0 1 2 3 4'

1/2



F SECTION F

SCALE 1"=1'

0 1 2 3 4'

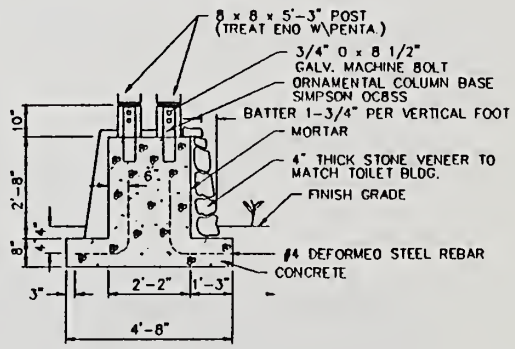
1/2

SIDE ELEVATION

SCALE 1/2"=1'

0 1 2 3 4'

1/2



G SECTION G

SCALE 1/2"=1'

0 1 2 3 4'

1/2

BULLETIN BOARD/FEE DEPOSITORY

LDSI 6011

Plot "D"

DWG.	SCALE	INS. FAC.
ECON	1"=1'	.08333
DSEC	1-1/2"=1'	.125
FELEV	1/2"=1'	.04166
FSEC	1"=1'	.08333
GBULL	1/2"=1'	.04166
SIDELV	1/2"=1'	.04166
AFEEDEP	1"=1'	.08333
BROOFRA	1/2"=1'	.04166
CDET	1-1/2"=1'	.125

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

DRAWN	R. FENDER	DATE 9-12-88
DESIGNED		DATE
CHECKED		DATE
REVIEWED		DATE

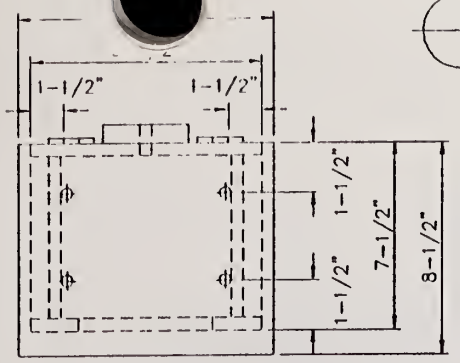
BULLETIN BOARD & FEE DEPOSITORY

REC[illegible]7

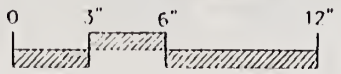
SHT. 1 OF 1

WILDERNESS REGISTRATION BOX

LDRB 6001

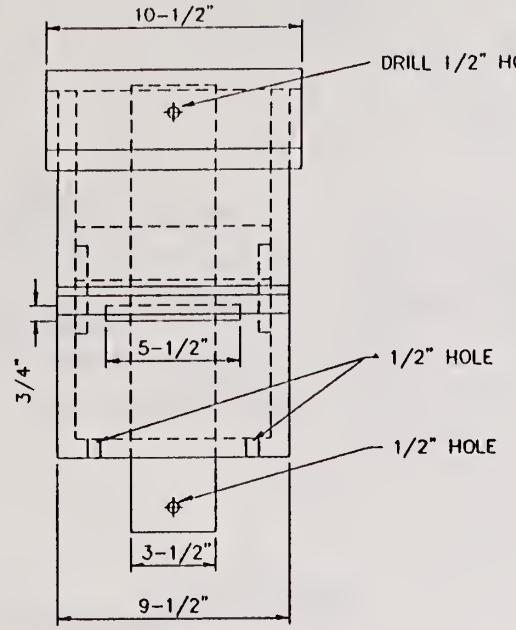


PLAN

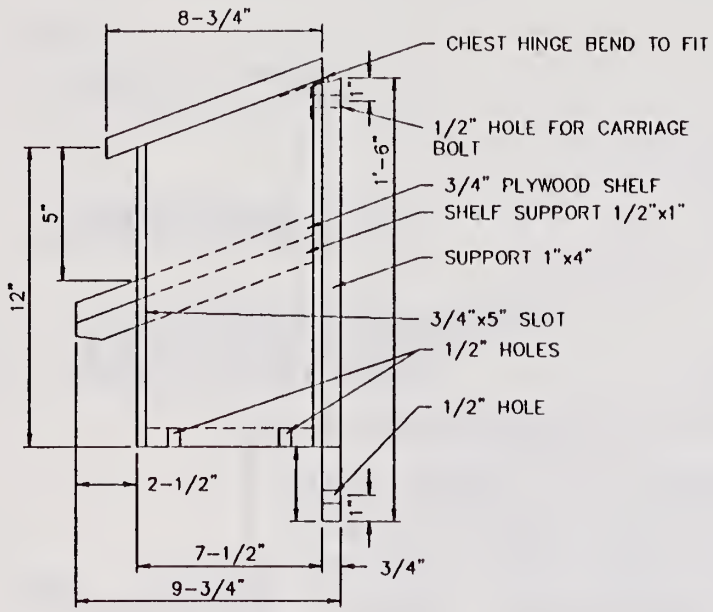


REGISTER BOX TO BE MADE WITH 3/4" MARINE PLYWOOD EXCEPT FOR FRONT AND BACK WHICH ARE 1/2" MARINE PLYWOOD

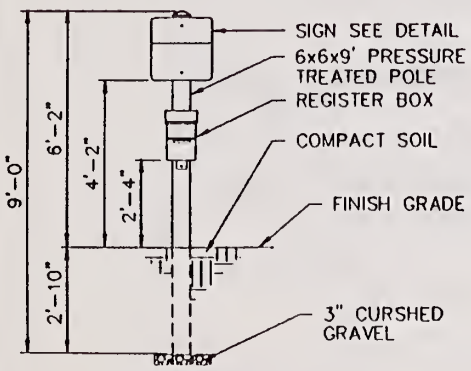
FOREST SERVICE WILL PROVIDE OPERATING INSTRUCTIONS, CHAIN & PENCIL



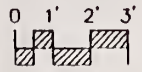
ELEVATION

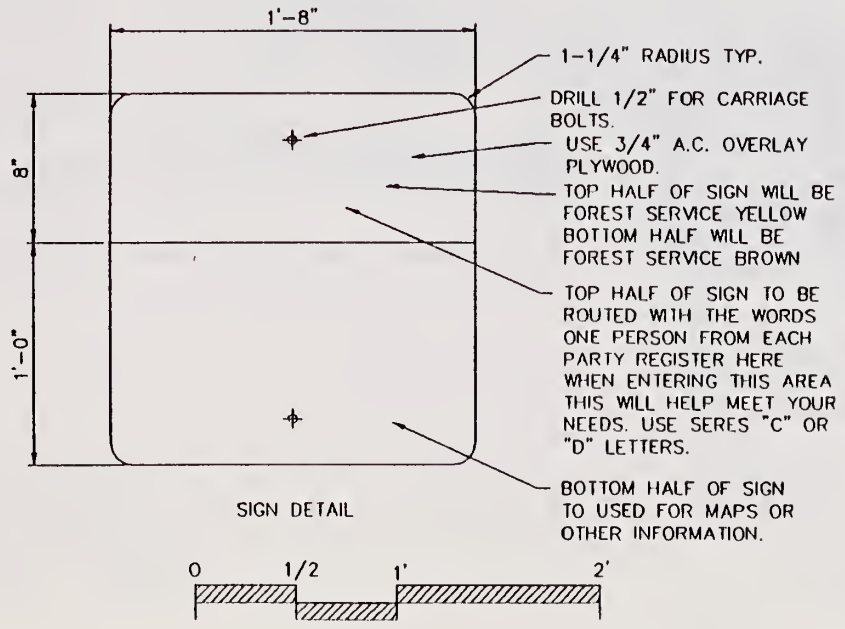


SIDE ELEVATION



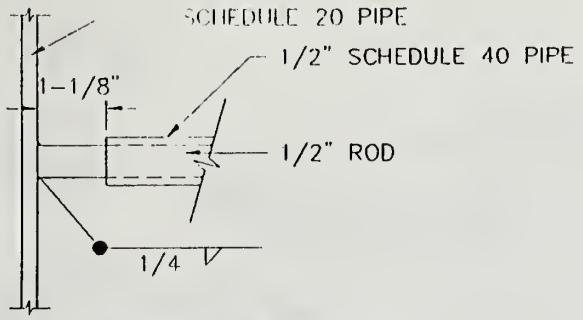
ELEVATION





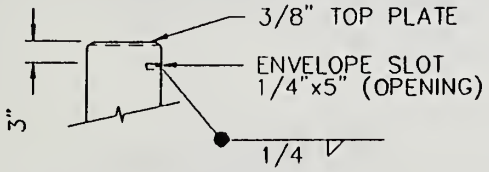
SIGN DETAIL

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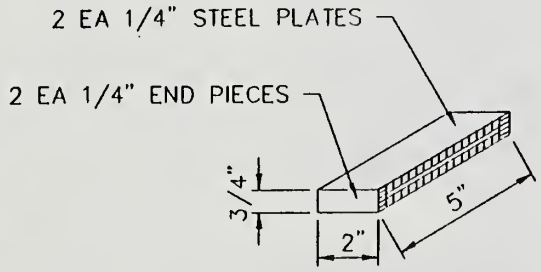
SWIVEL PIN DETAIL



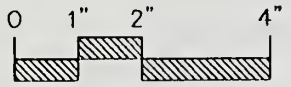


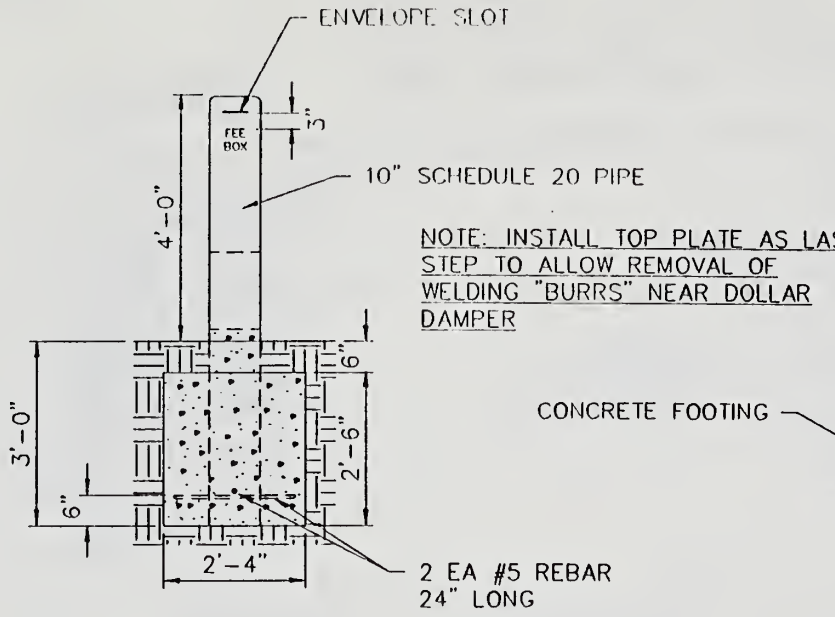
TOP OF PIPE DETAIL



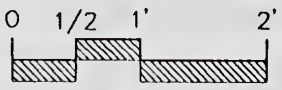


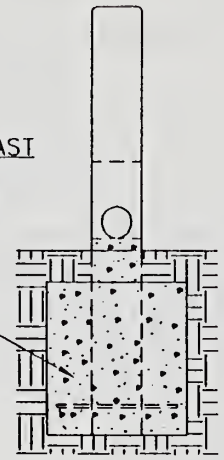
ENVELOPE SLOT



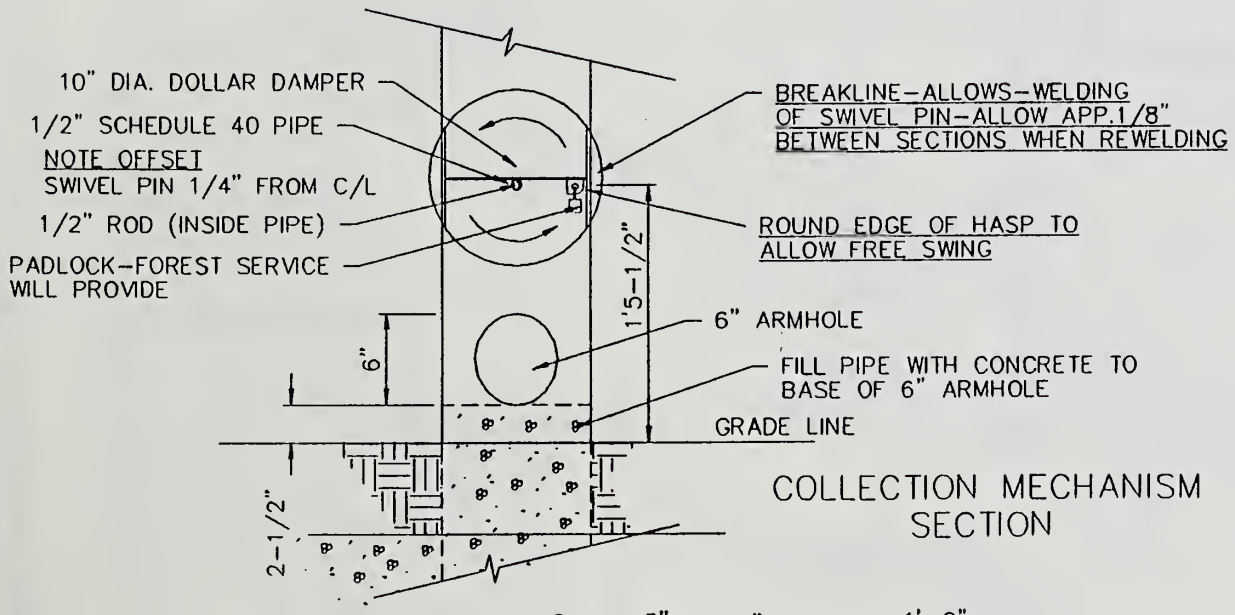


FEE COLLECTION BOX
FRONT ELEVATION

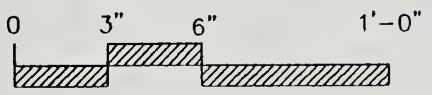




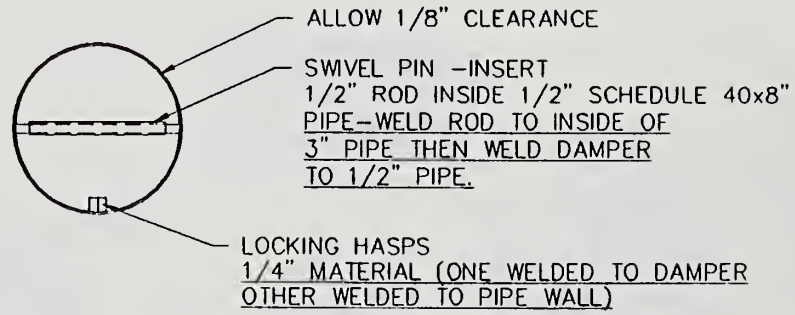
FEE COLLECTION BOX
REAR ELEVATION



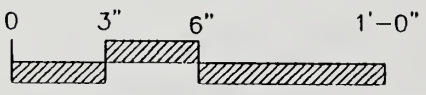
COLLECTION MECHANISM
SECTION



NOTE: OFFSET SWIVEL PIN 1/4" FROM & AWAY FROM HASPS.



DOLLAR DAMPER
PLAN VIEW
(FROM UNDERSIDE)

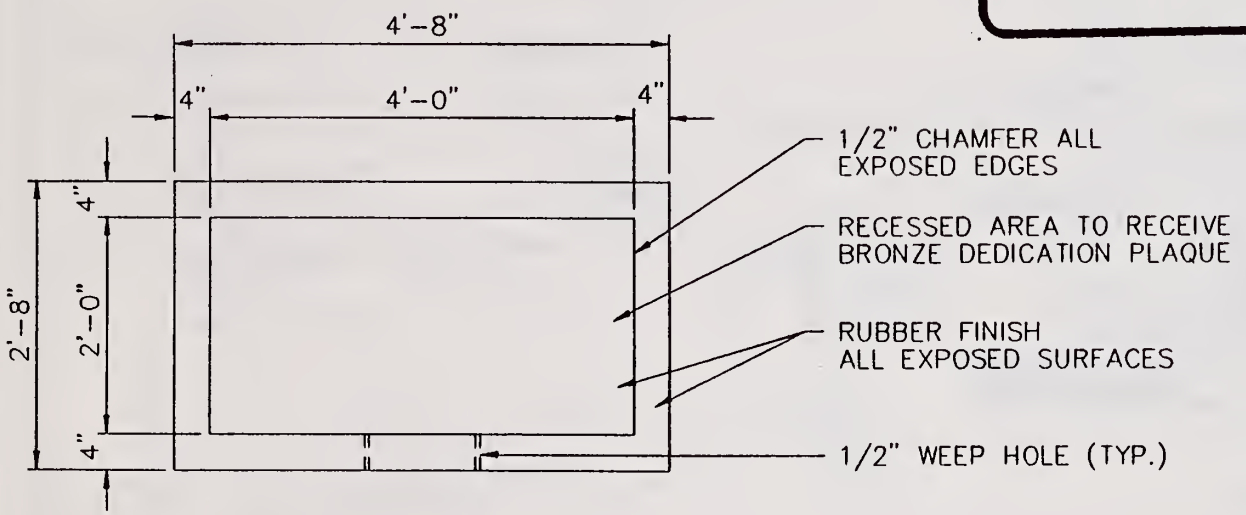


FEE COLLECTION BOX

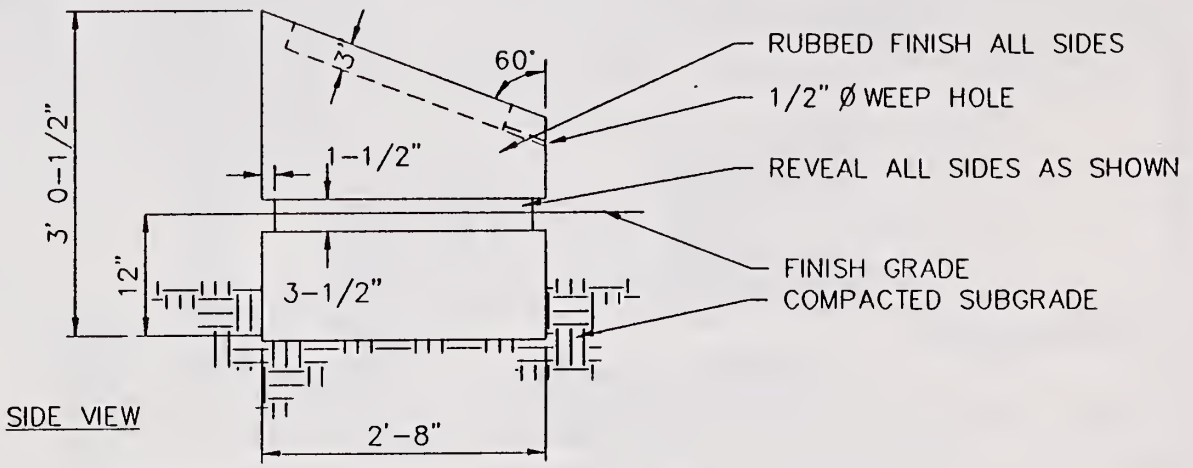
LDFB 4001

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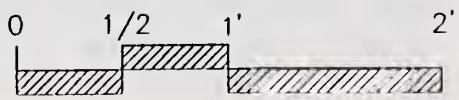
TOP VIEW



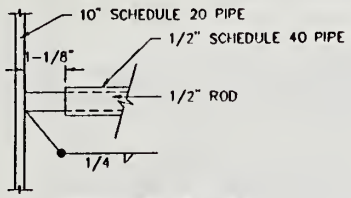
SIDE VIEW

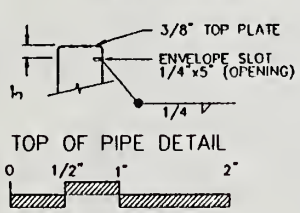
DEDICATION PLAZUE

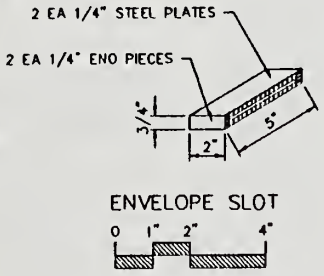
LDSI 6010

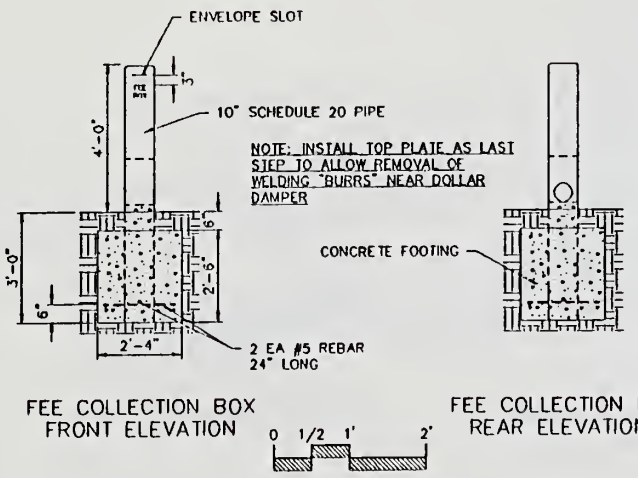


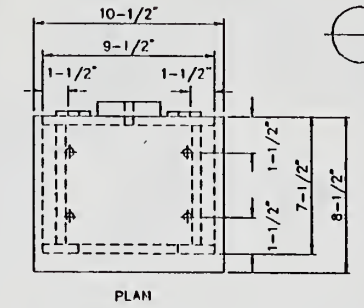
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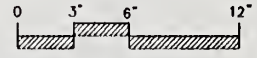






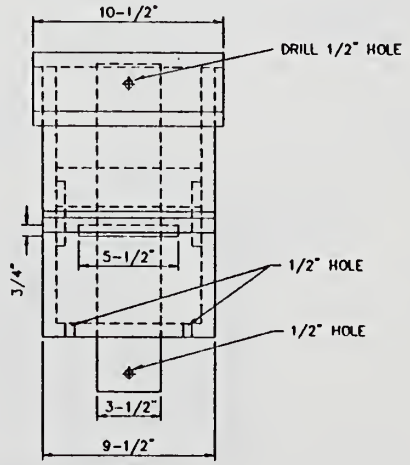
WILDERNESS REGISTRATION BOX

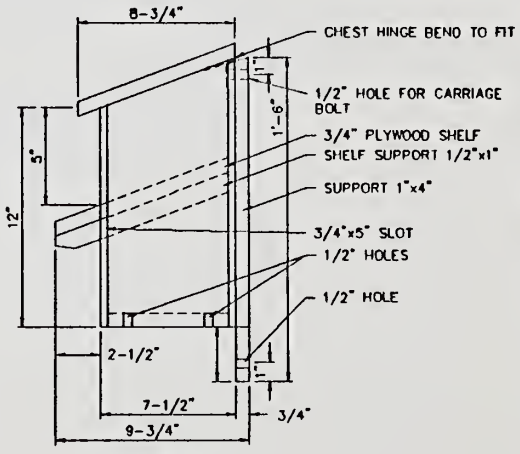
LDRB 6001

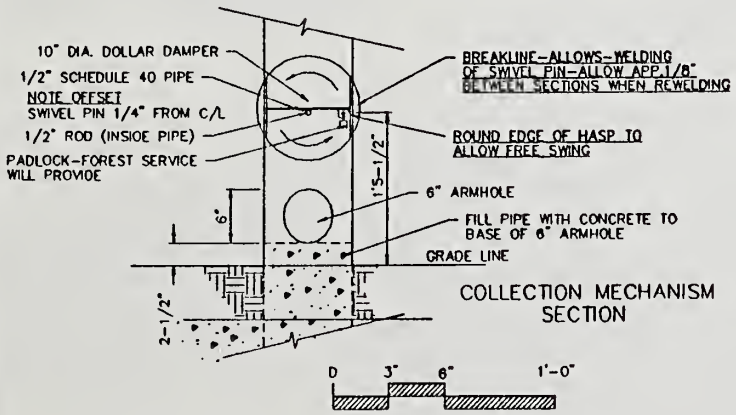


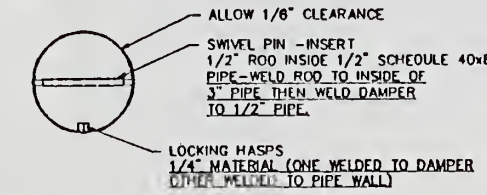
REGISTER BOX TO BE MADE WITH 3/4" MARINE PLYWOOD EXCEPT FOR FRONT AND BACK WHICH ARE 1/2" MARINE PLYWOOD

FOREST SERVICE WILL PROVIDE OPERATING INSTRUCTIONS, CHAIN & PENCIL



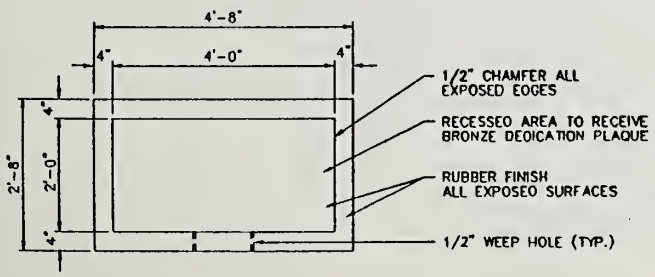


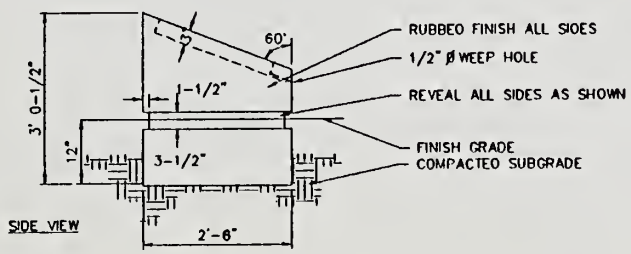


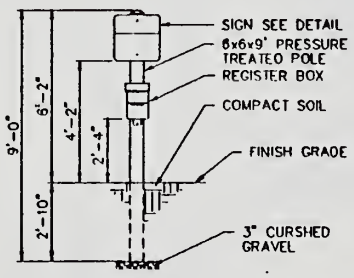


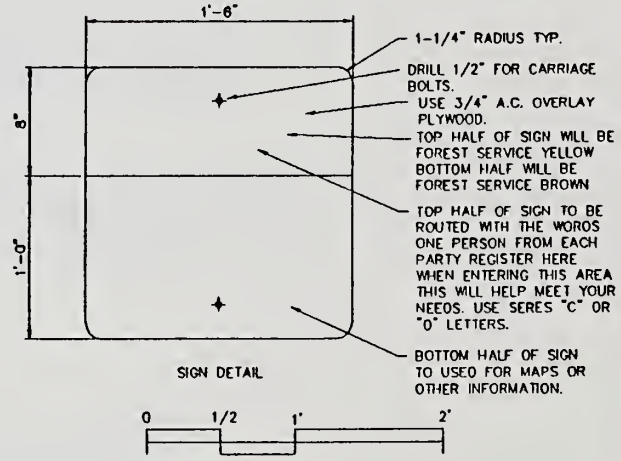
FEE COLLECTION BOX

LDFB 4001









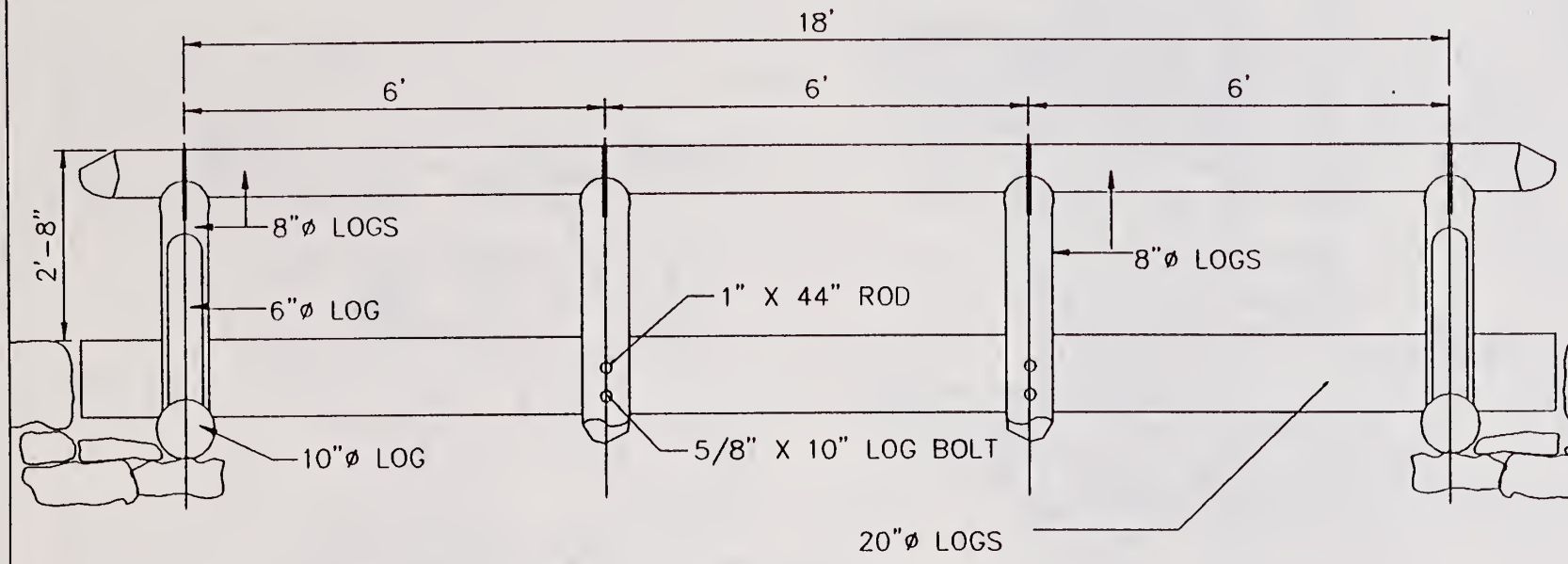
DEDICATION PLAQUE

LDSI 6010

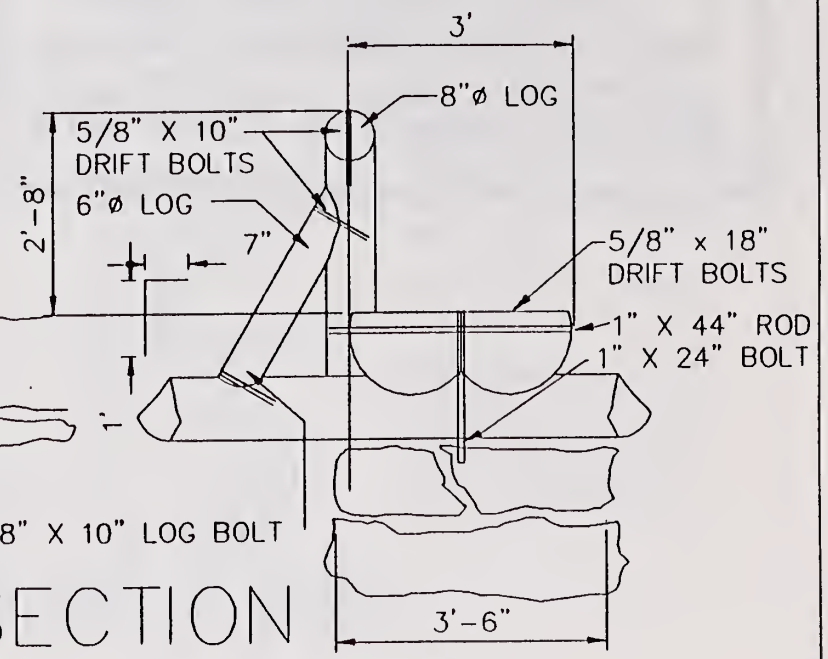


U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE THE PACIFIC NORTHWEST REGION	REGISTRATION BOX FEE COLLECTION DEDICATION PLAQUE RECORD
DRAWN R. FENDER DATE 9-12-88 DESIGNED DATE CHECKED DATE REVIEWED DATE	SHT. 1 OF 1

THIS SHEET IS DISTRIBUTED FOR
INFORMATION PURPOSES, ONLY.
IT HAS NOT BEEN EDITED FOR
CADD CONVERSION ERRORS.



ELEVATION



SECTION

SCALE: 1/2"=1'-0" SETVAR DIMSCALE TO 24"
DTEXT=3",9" INSERT WBLOCK @ .04166

FOOTBRIDGE

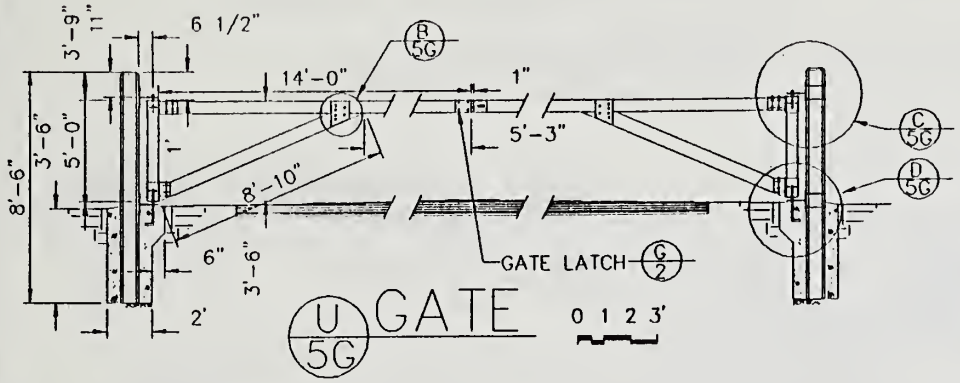
LDBR3001 8-19-88 0 1 2 3'

NOTES:

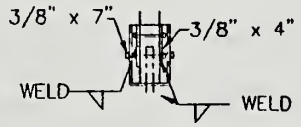
RODS: RODS TO BE THREADED BOTH ENDS AND FITTED WITH TWO NUTS AND MALLEABLE IRON WASHERS EACH. BORE HOLES FOR RODS AND MACHINE BOLTS 1/16" OVERSIZE.

DRIFT BOLTS: TO HAVE CHISEL POINTS AND BE DRIVEN ACROSS GRAIN TO LOGS. BORE HOLES FOR DRIFT BOLTS 1/8" UNDERSIZE.

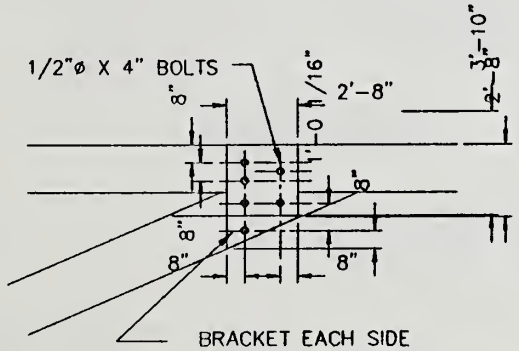
FOOTINGS: FOOTINGS (AND PIERS) SHALL BE SPECIFICALLY DESIGNED TO FIT EACH CIRCUMSTANCE. TWO OR MORE BRIDGES SUPPORTED BY PIERS MAY BE USED TO SPAN A STREAM IF THE SITE REQUIRES IT.



U 5G GATE 0 1 2 3'



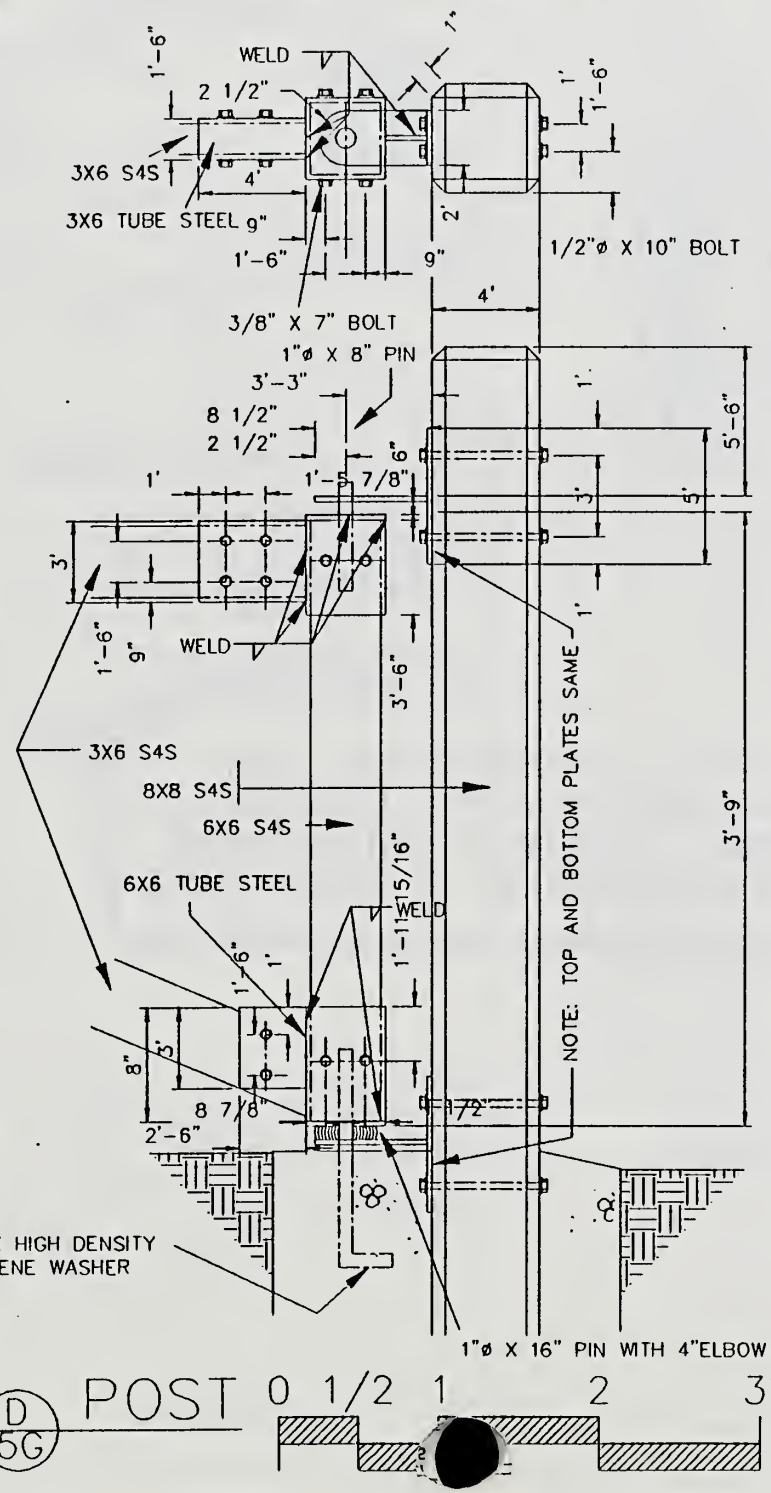
F 5G BASE 0 1/2 1 2 3'



B 5G BRACKET 0 1/2 1 2 3'

NOTES:

ALL NUT, BOLTS, WASHERS – GALVANIZED
REMOVE & DEBURR EXCESS LENGTH BOLTS
PRIME & PAINT ALL METALWORK PRIOR TO INSTALLATION
DRILL HOLES IN METALWORK 1/16" LARGER THAN SPECIFIED BOLT
ALL STEEL PLATE 3/8" THICKNESS
SUBMIT SHOP DRAWINGS FOR APPROVAL
ALL WOOD MEMBERS – PRESSURE TREATED WITH CCA-C WITH BROWN STAIN (LP22)



D 5G POST 0 1/2 1 2 3'

WOOD GATE VARIATION

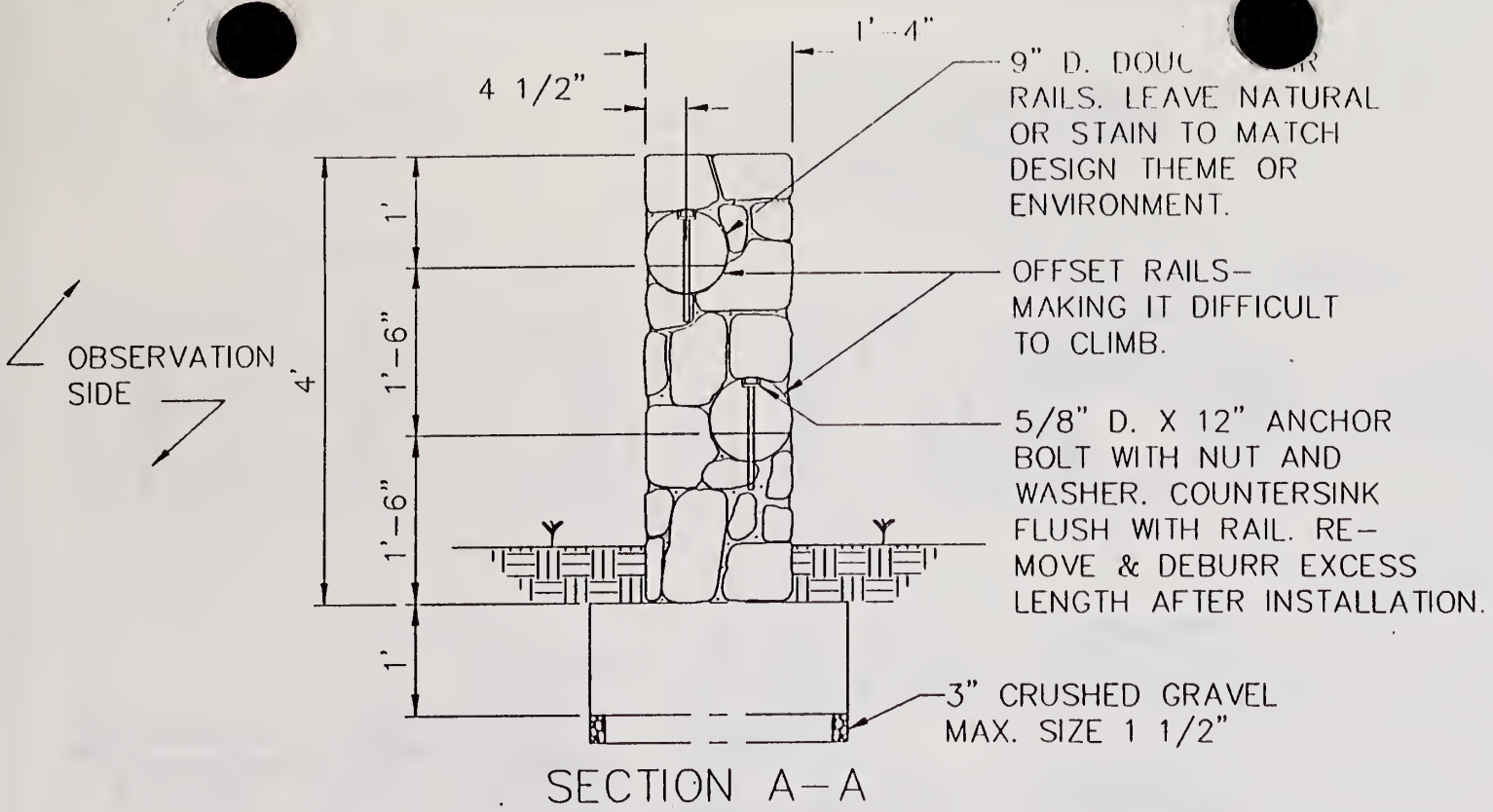
LDGA6002

AUGUST 22,

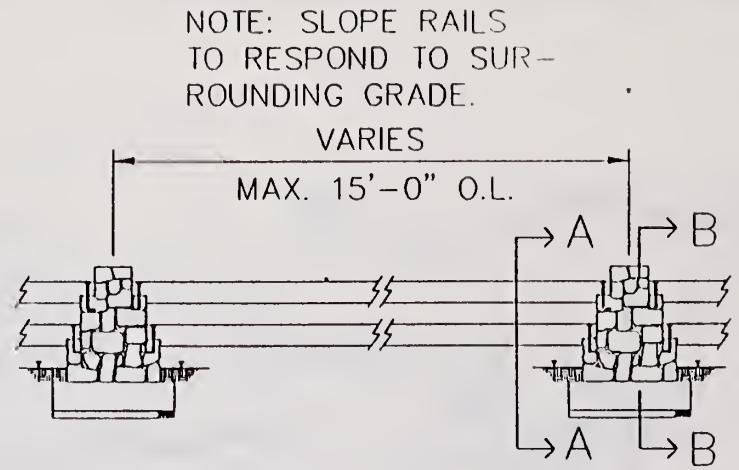
0 1 2 3'

SCALE=1/4"=1'-0"
DIMSCALE=48"
TEXT= 6", 18"
INSERT @ .02083

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

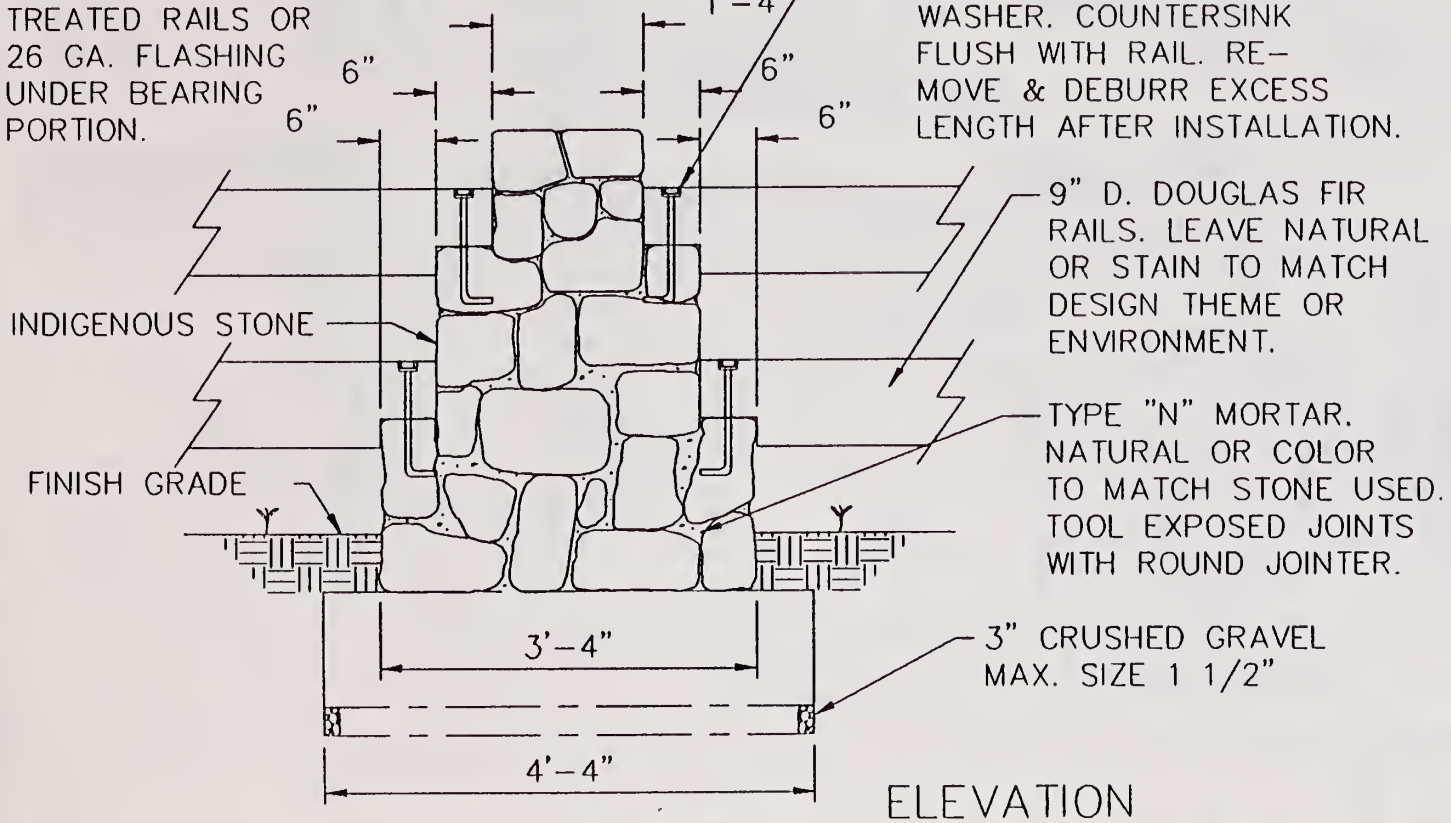


SECTION A-A



ELEVATION

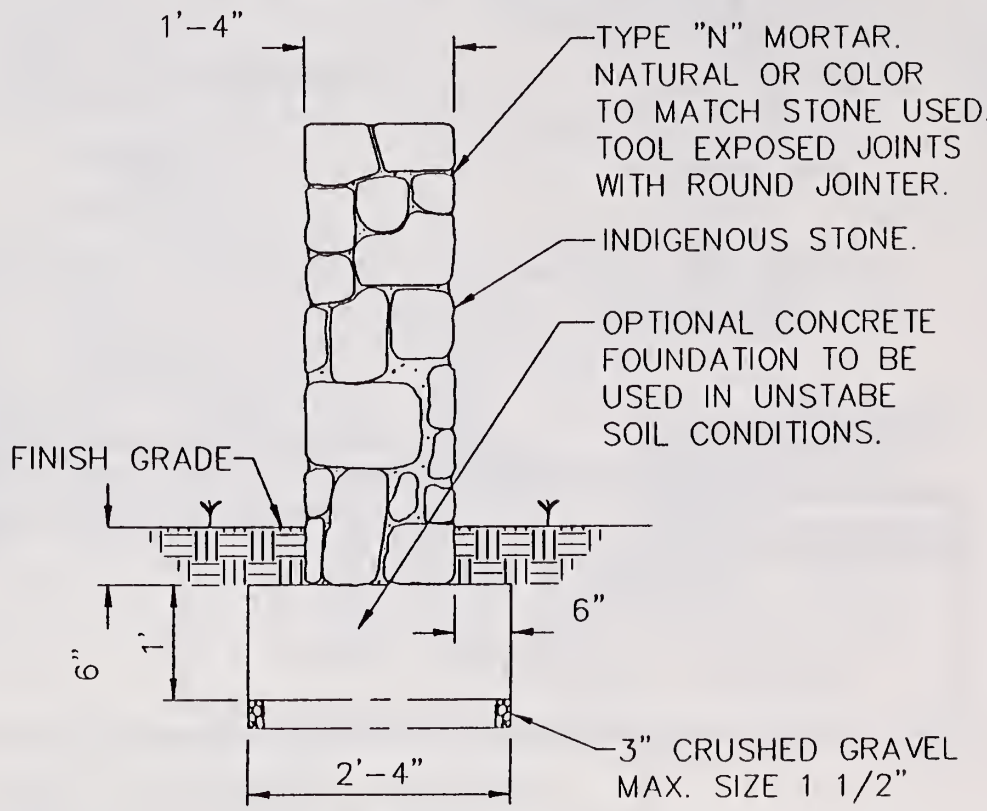
THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.



ELEVATION

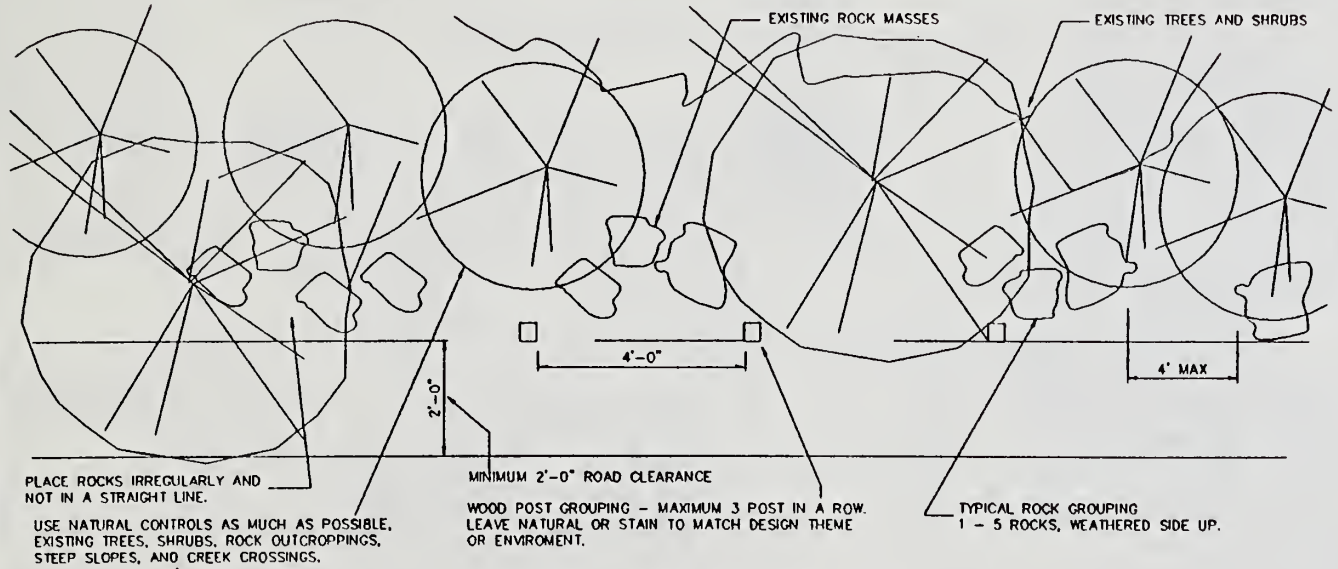


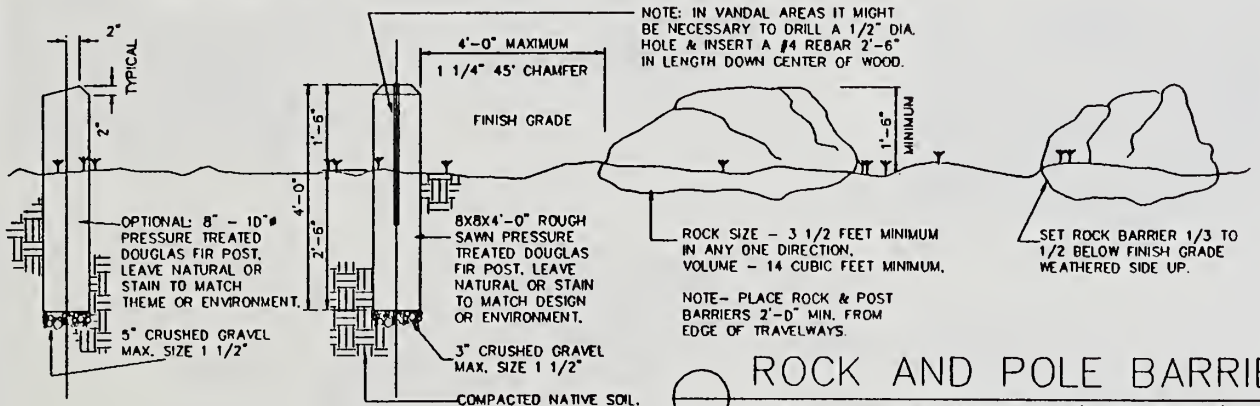
X / X ROCK AND POLE BARRIER
LDBF6001 7-30-88



SECTION B-B

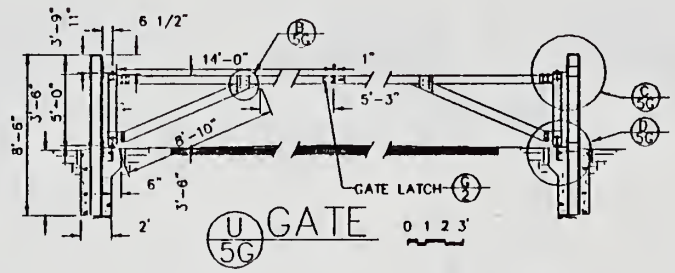
THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

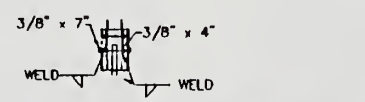




ROCK AND POLE BARRIER

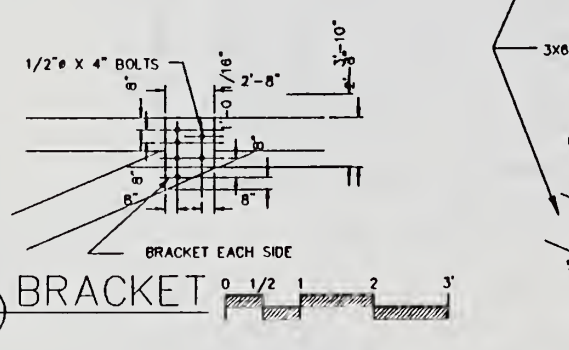
LDBF6001 AUGUST 19, 1988 0 1/2 1 2 3'

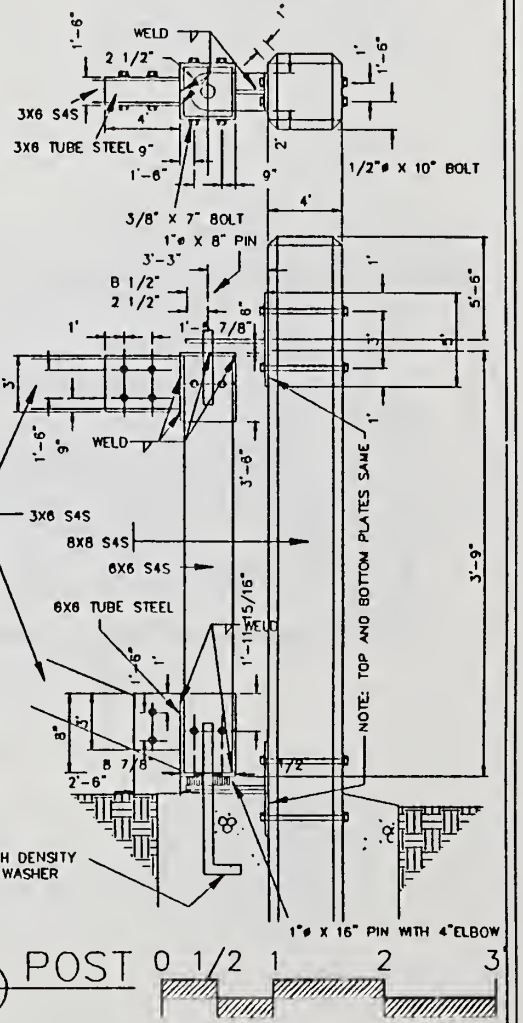


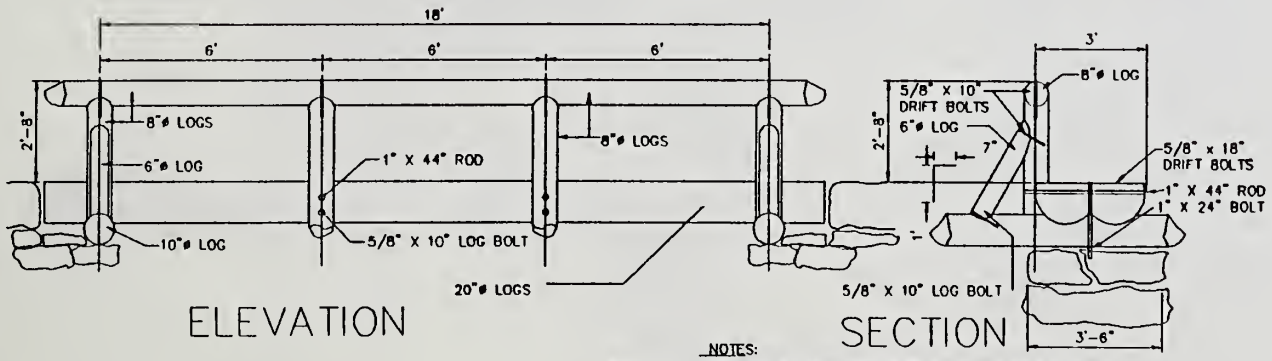


NOTES:

ALL NUT, BOLTS, WASHERS - GALVANIZED
REMOVE & DEBURR EXCESS LENGTH BOLTS
PRIME & PAINT ALL METALWORK PRIOR TO INSTALLATION
DRILL HOLES IN METALWORK 1/16" LARGER THAN SPECIFIED BOLT
ALL STEEL PLATE 3/8" THICKNESS
SUBMIT SHOP DRAWINGS FOR APPROVAL
ALL WOOD MEMBERS - PRESSURE TREATED WITH CCA-C WITH BROWN STAIN (LP22)







WOOD GATE VARIATION

LDGA6002
AUGUST 22,1988 0 1 2 3'

NOTES:

RODS: RODS TO BE THREADED BOTH ENDS AND FITTED WITH TWO NUTS AND MALLEABLE IRON WASHERS EACH. BORE HOLES FOR RODS AND MACHINE BOLTS 1/16" OVERSIZE.

DRIFT BOLTS: TO HAVE CHISEL POINTS AND BE DRIVEN ACROSS GRAIN TO LOGS. BORE HOLES FOR DRIFT BOLTS 1/8" UNDERSIZE.

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FOOTBRIDGE

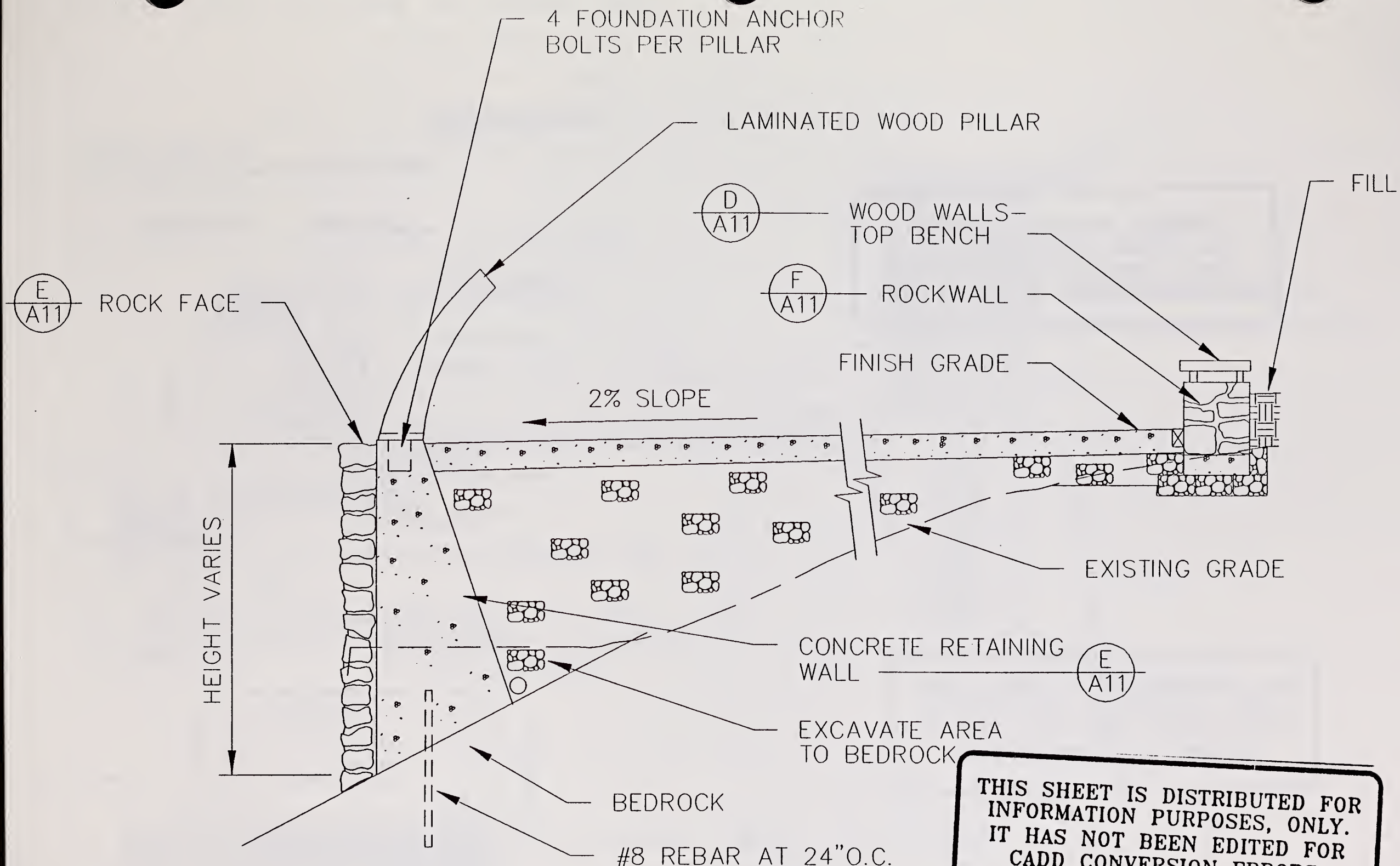
LDBR3001 8-19-88 0 1 2 3'

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

DRAWN J.ROSSILLO DATE 8-23-88
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

BARRIER, BRIDGE & GATE DETAILS
8-23-88
RECO

SHT.
OF

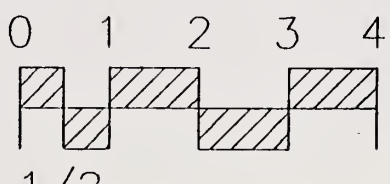


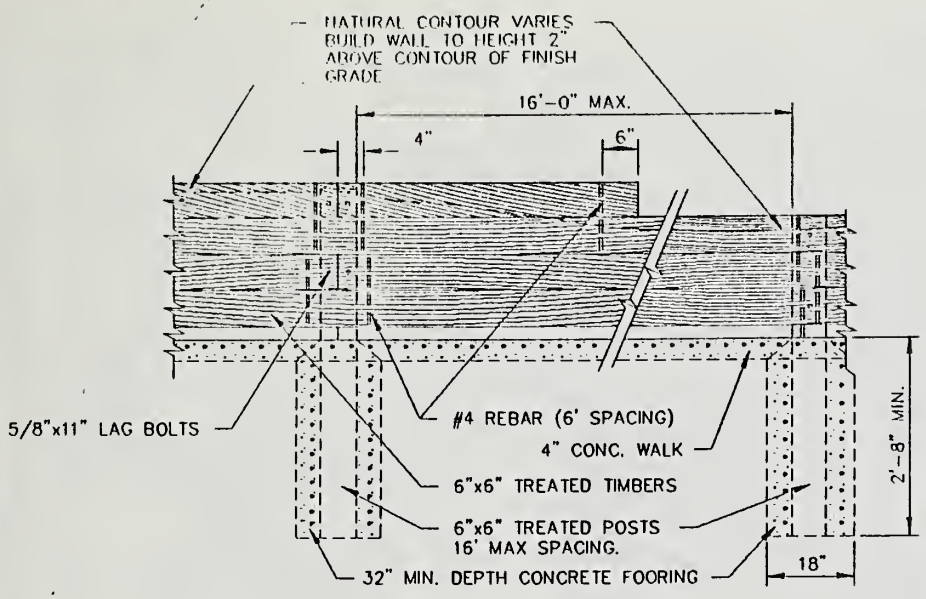
THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

VIEWPOINT SECTION

SCALE 3/8"=1'-0"

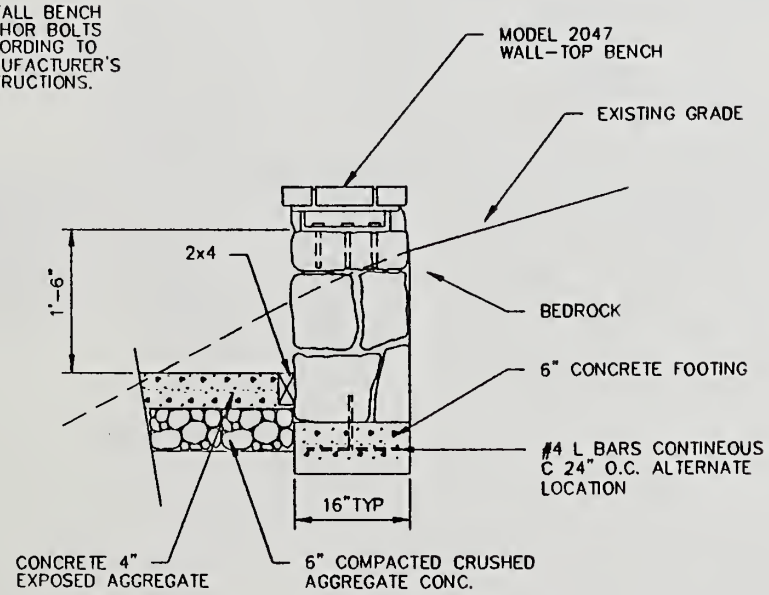
viewsec





NOTE:
ALL TIMBERS & LOGS TO BE PRESSURE TREATED WITH OSMOSE K-33 PRESERVATIVE TO .60 RETENTION.

NOTE
INSTALL BENCH ANCHOR BOLTS ACCORDING TO MANUFACTURER'S INSTRUCTIONS.



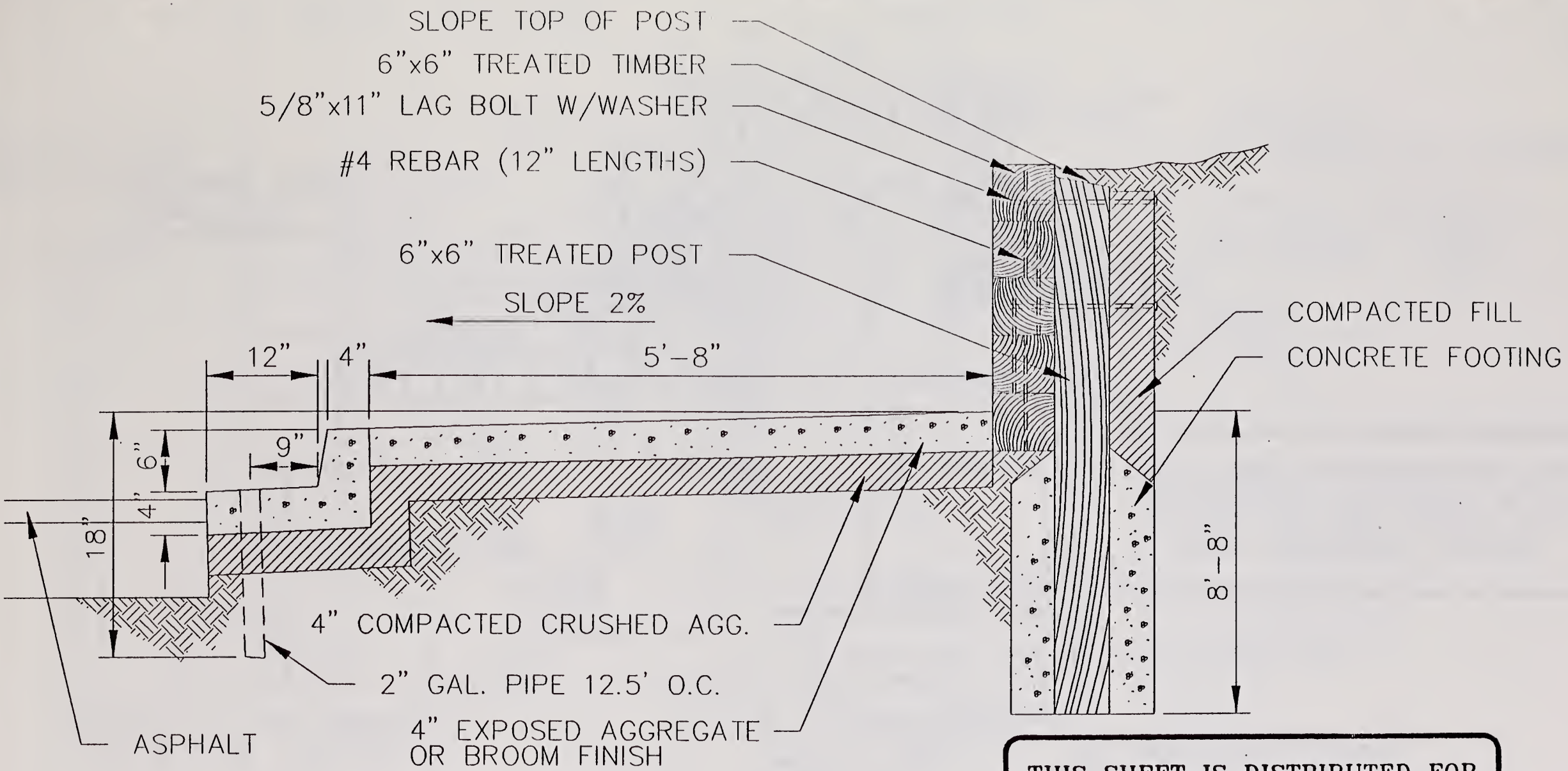
F / A11 ROCK WALL AND WOOD BENCH DETAIL
SCALE 1"= 1'-0"

0 1/2 1 2 3'

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

CONCRETE & STONE RETAINING WALL

22, 2010



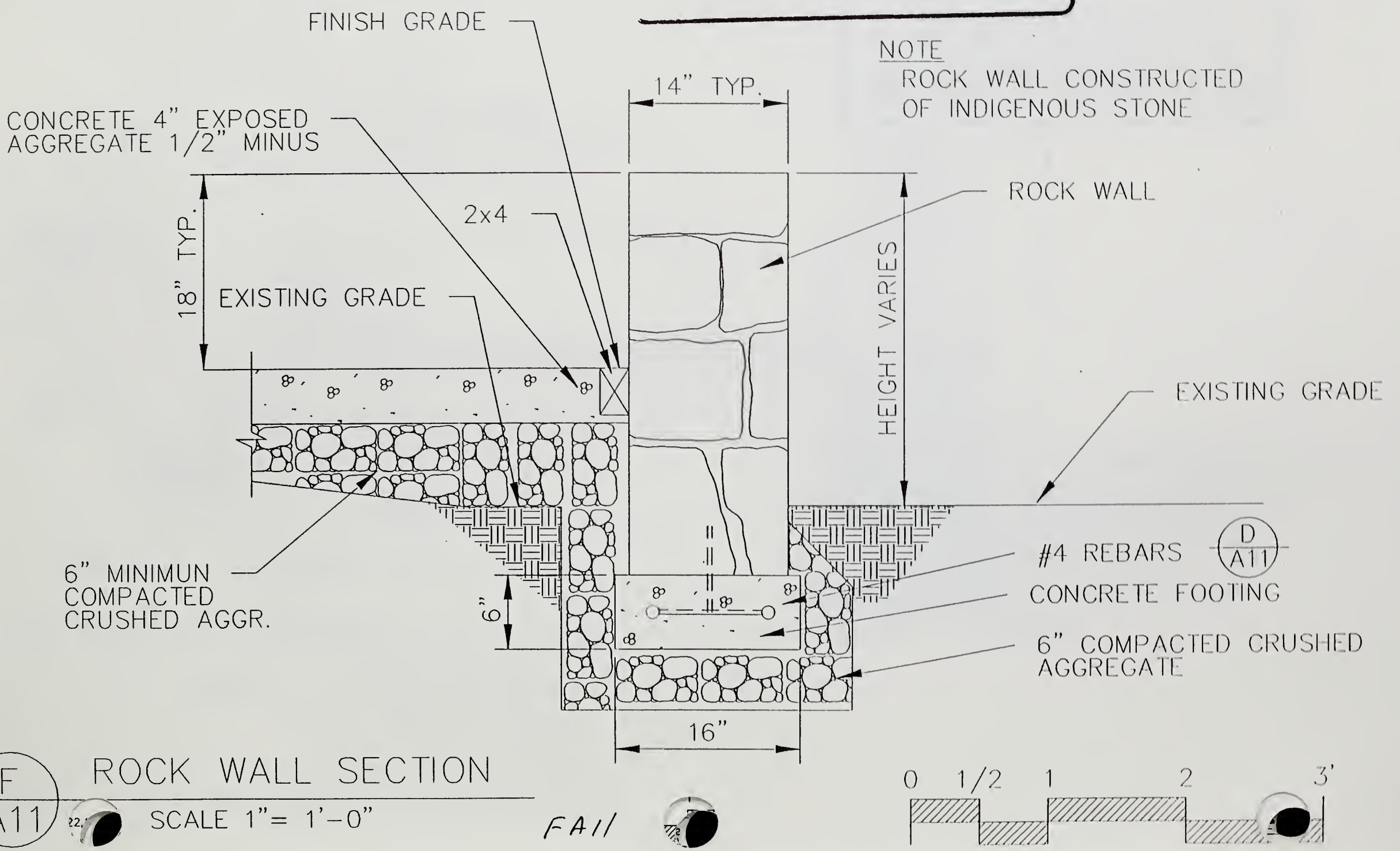
THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

CURB-WALK ℄ WOOD RETAINING WALL SECTION

SCALE 3/4"= 1'-0"

LDWA6009

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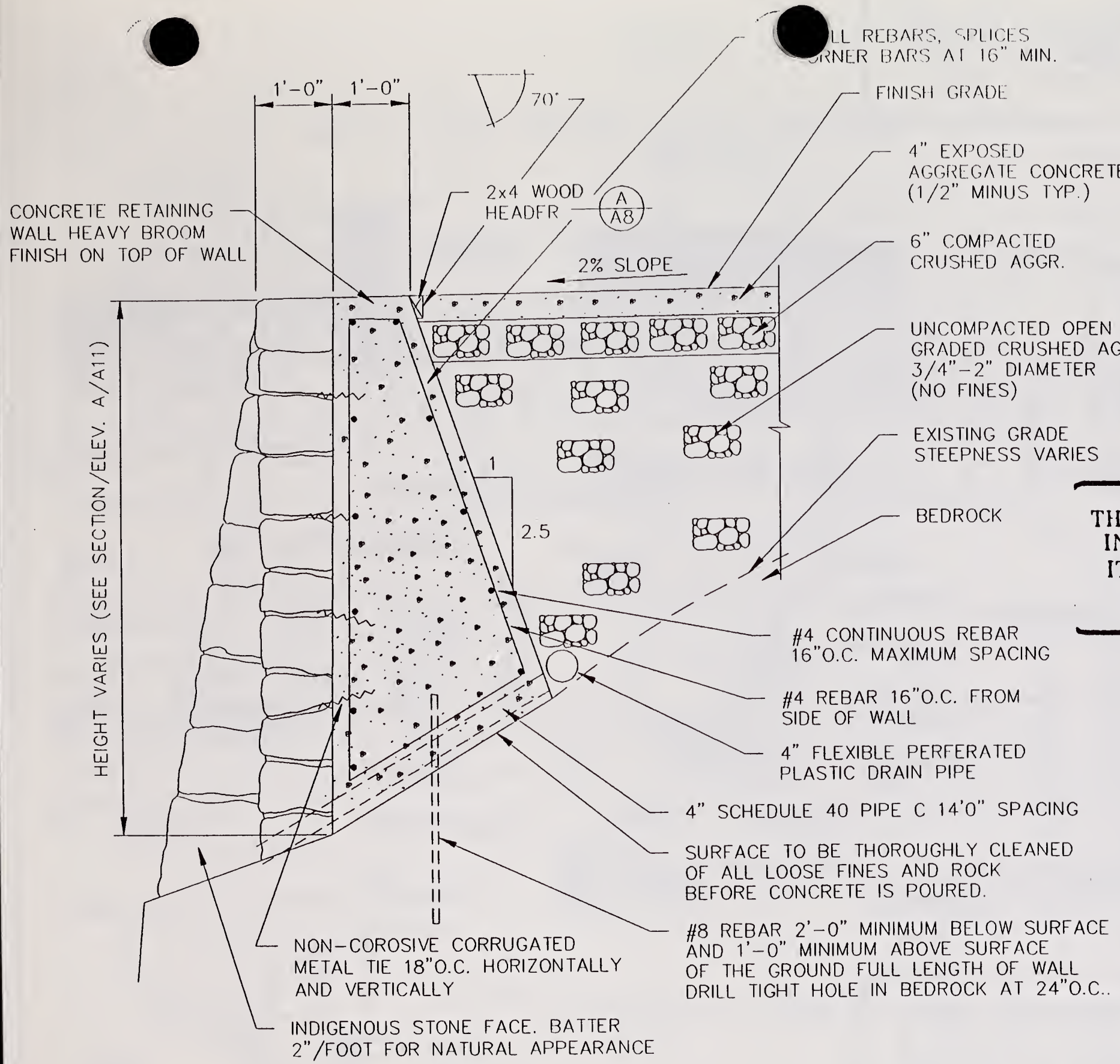
F
A11

ROCK WALL SECTION

SCALE 1"= 1'-0"

FALL

0 1/2 1 2 3'



THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

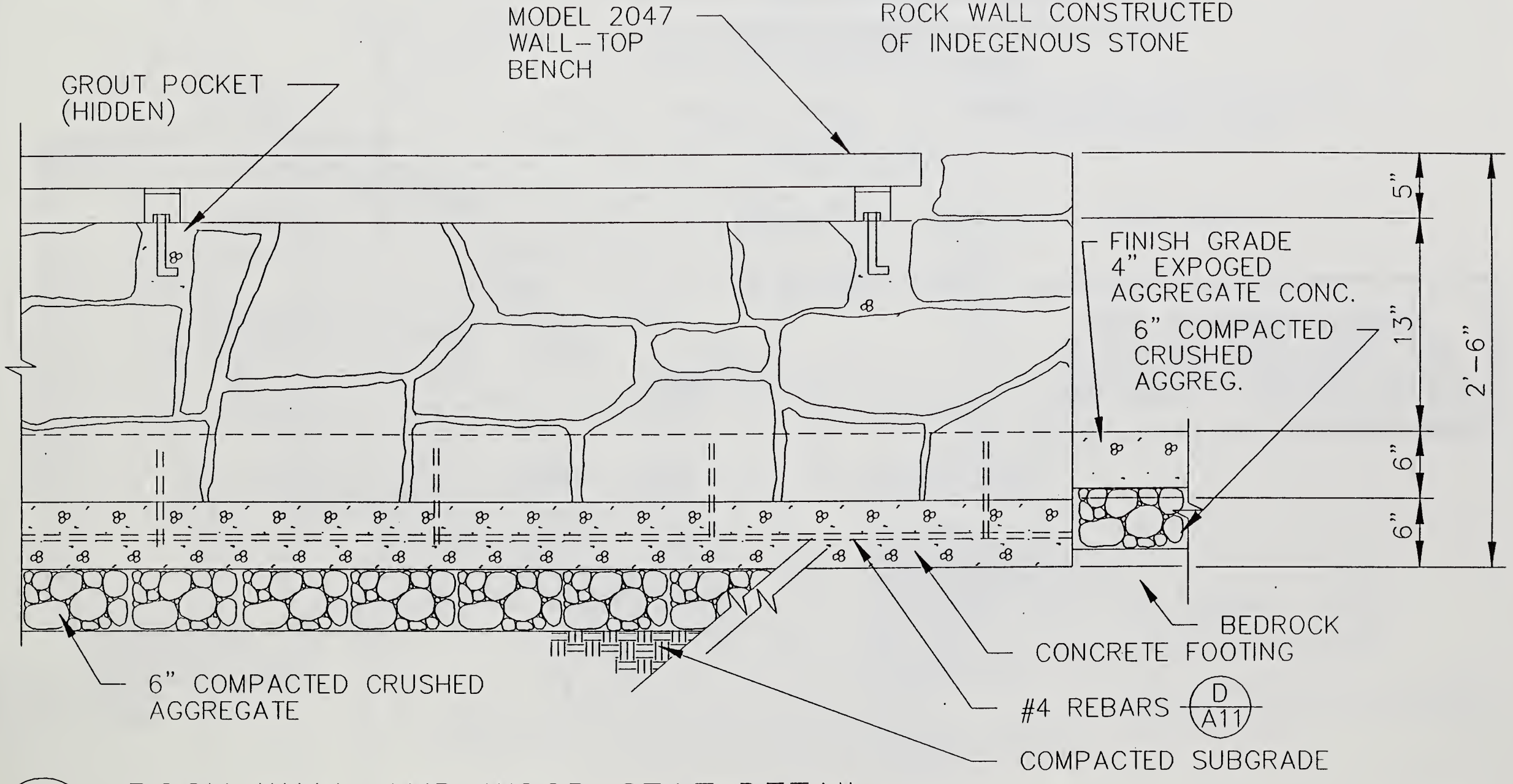
E / A11 RETAINING WALL SECTION

SCALE 3/4"=1'-0"



THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

NOTE
ROCK WALL CONSTRUCTED OF INDEGENOUS STONE



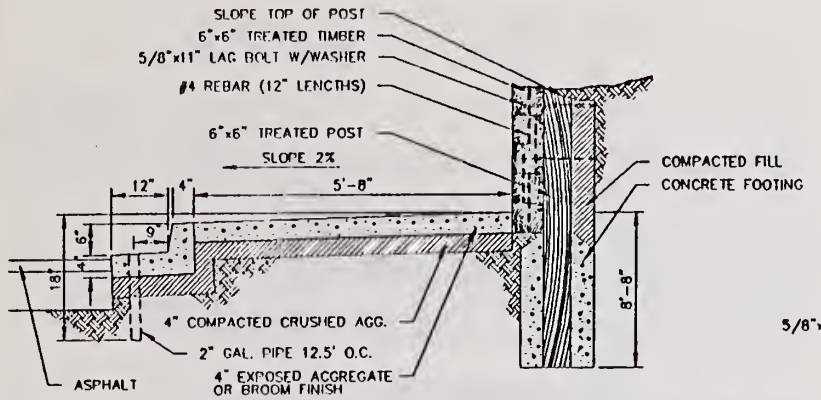
C / A11 ROCK WALL AND WOOD SEAT DETAIL

SCALE 1"= 1'-0"

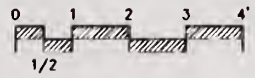
CA11

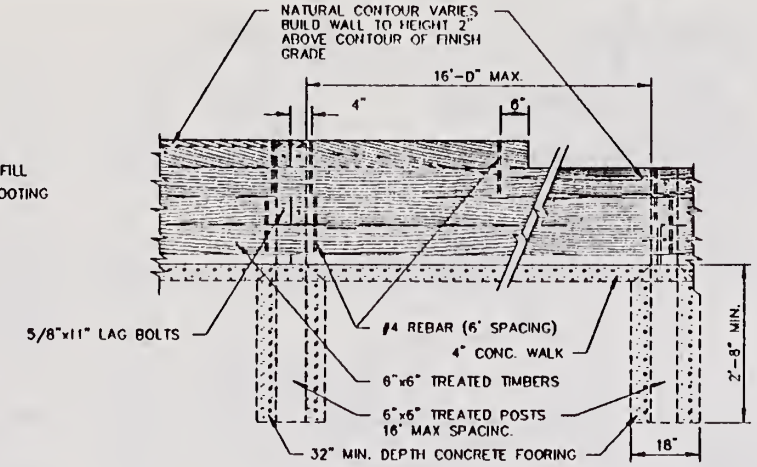
0 1/2 1 2 3'

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

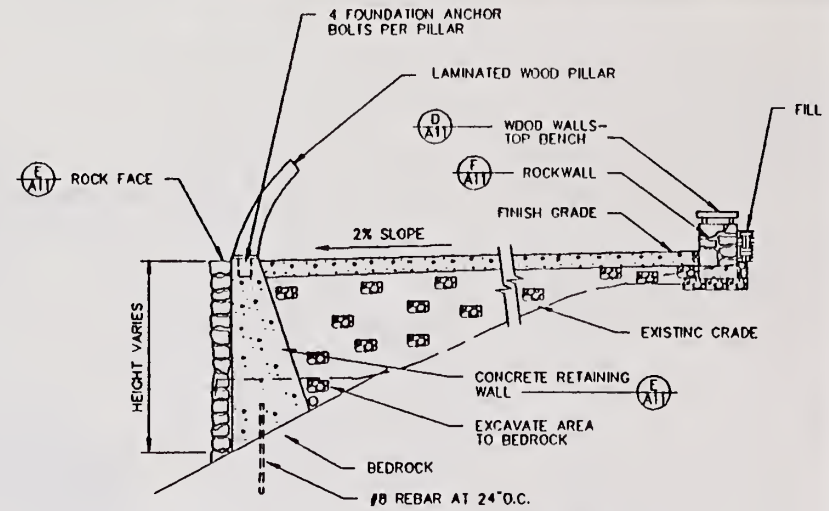


CURB-WALK & WOOD RETAINING WALL SECTION
SCALE 3/4"= 1'-0" LDWA6009

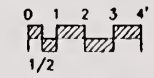


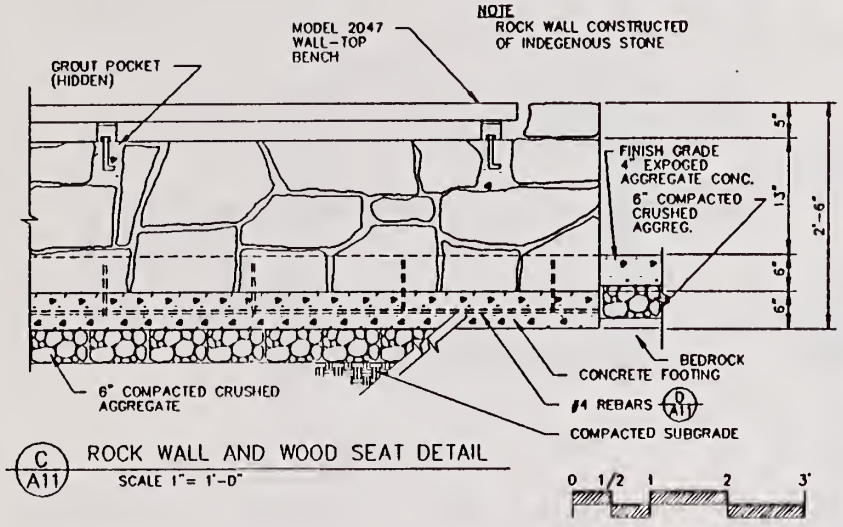


NOTE:
ALL TIMBERS & LOGS TO BE PRESSURE TREATED WITH OSMOSE K-33 PRESERVATIVE TO .60 RETENTION.



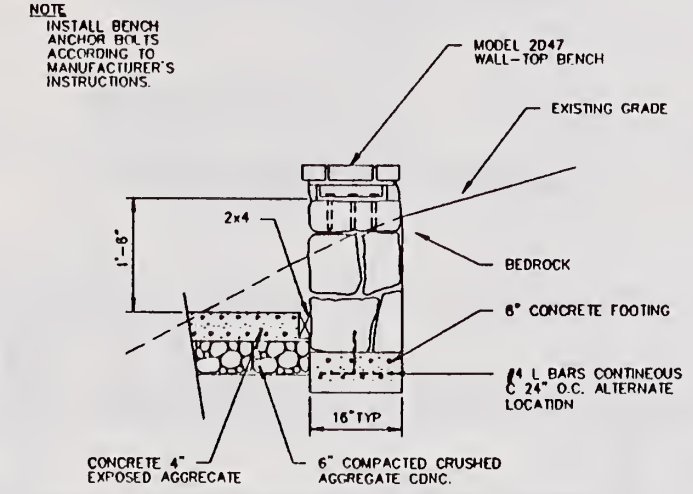
VIEWPOINT SECTION
SCALE 3/8"=1'-0"





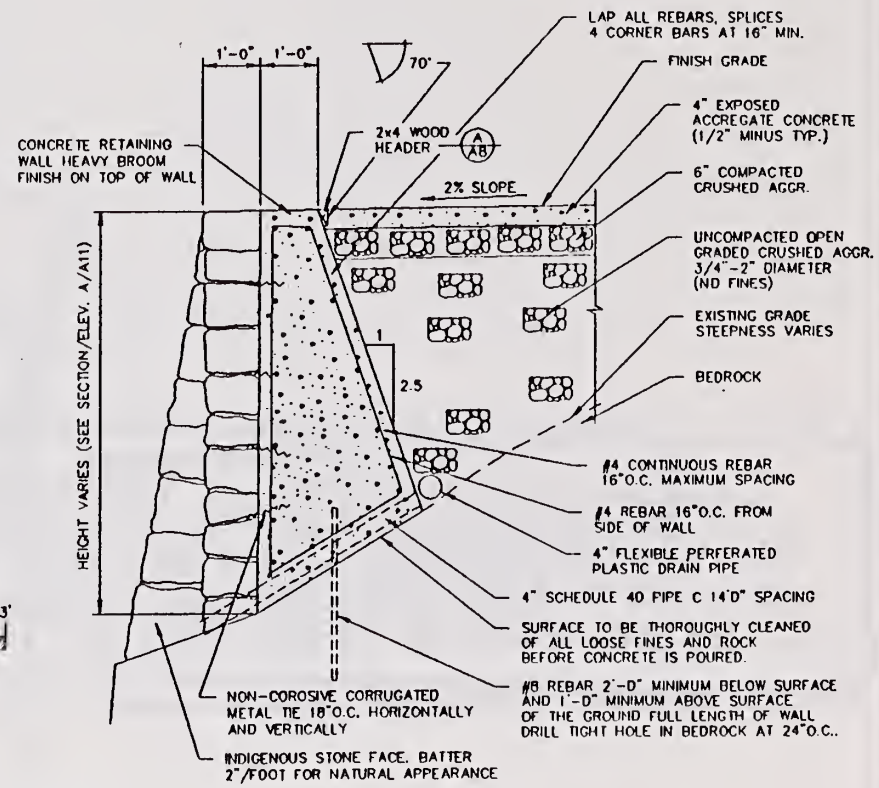
C A11 ROCK WALL AND WOOD SEAT DETAIL
SCALE 1"= 1'-0"

NOTE
INSTALL BENCH ANCHOR BOLTS ACCORDING TO MANUFACTURER'S INSTRUCTIONS.

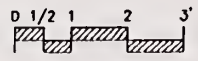


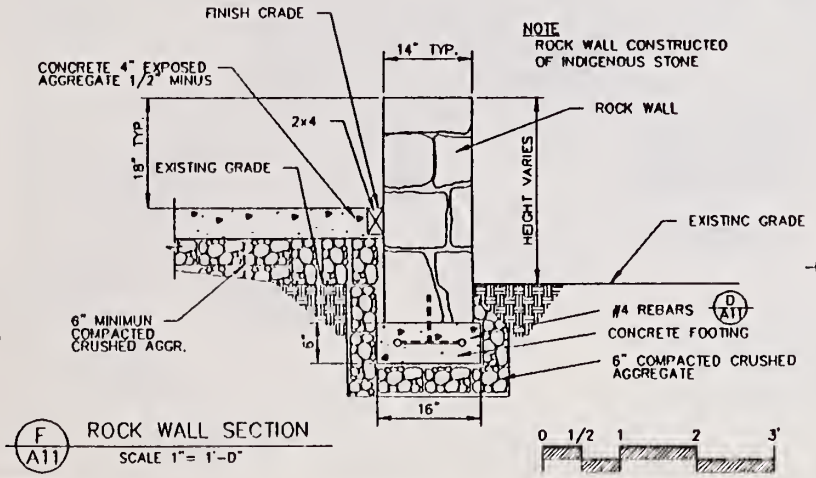
F A11 ROCK WALL AND WOOD BENCH DETAIL
SCALE 1"= 1'-0"





E A11 RETAINING WALL SECTION
SCALE 3/4"=1'-0"





F A11 ROCK WALL SECTION
SCALE 1"= 1'-0"

CONCRETE & STONE RETAINING WALL
LDWA 6010

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

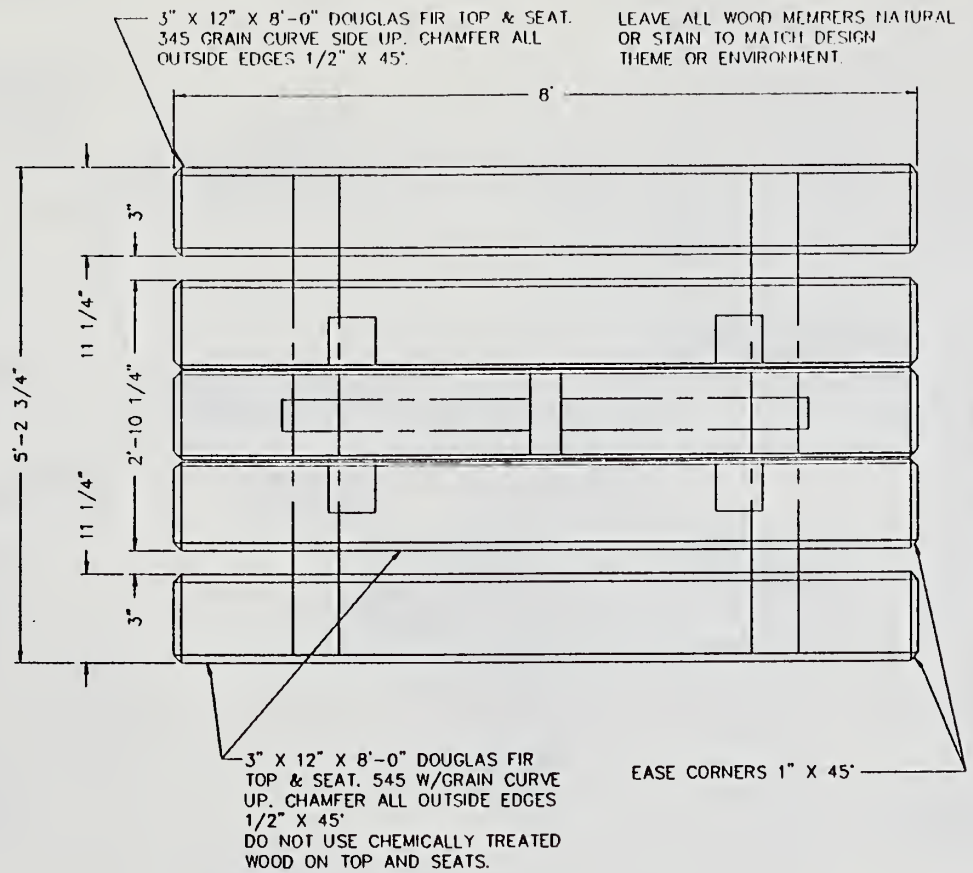
DRAWN	R. FENCE	DATE 9-12-88
DESIGNED		DATE
CHECKED		DATE
REVIEWED		DATE

RETAINING WALLS & WALL SEAT

REC00014

SHT. 1 OF 1

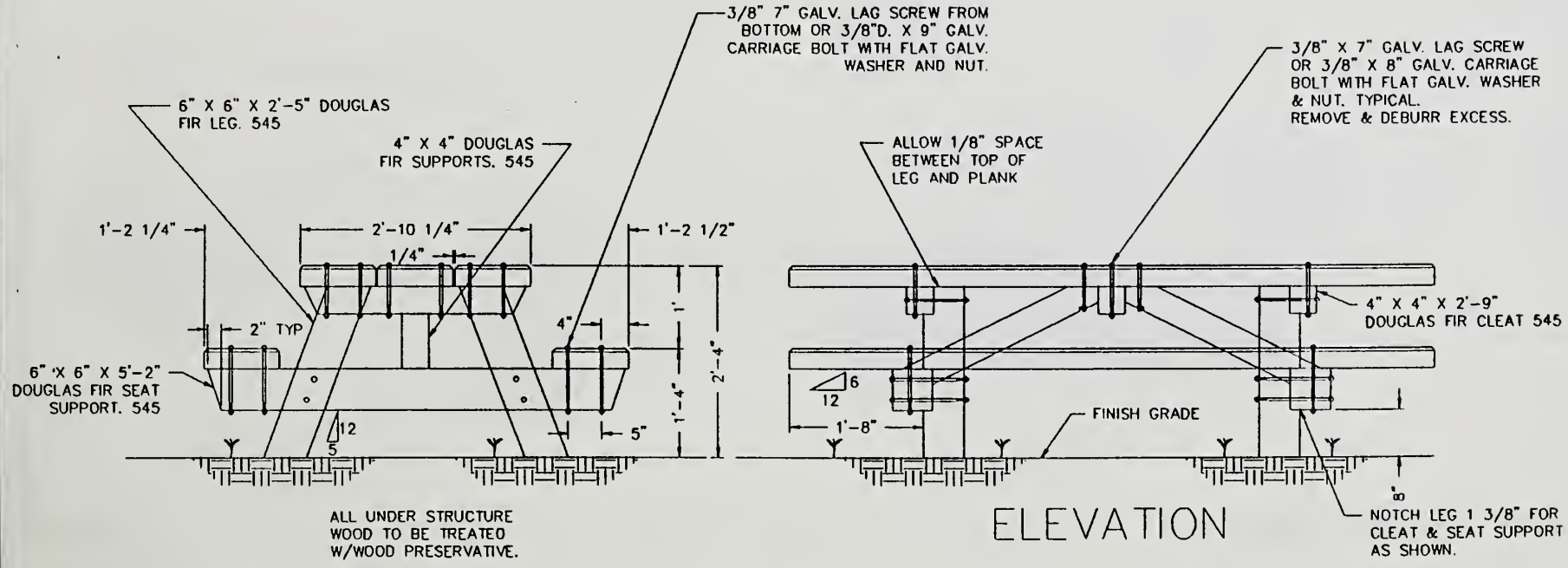
NOTES



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PLAN

SCALE: 1"=1'-0" SETVAR DIMSCALE TO 12"
DTEXT=1 1/2",4 1/2" INSERT WBLOCK @ .08333



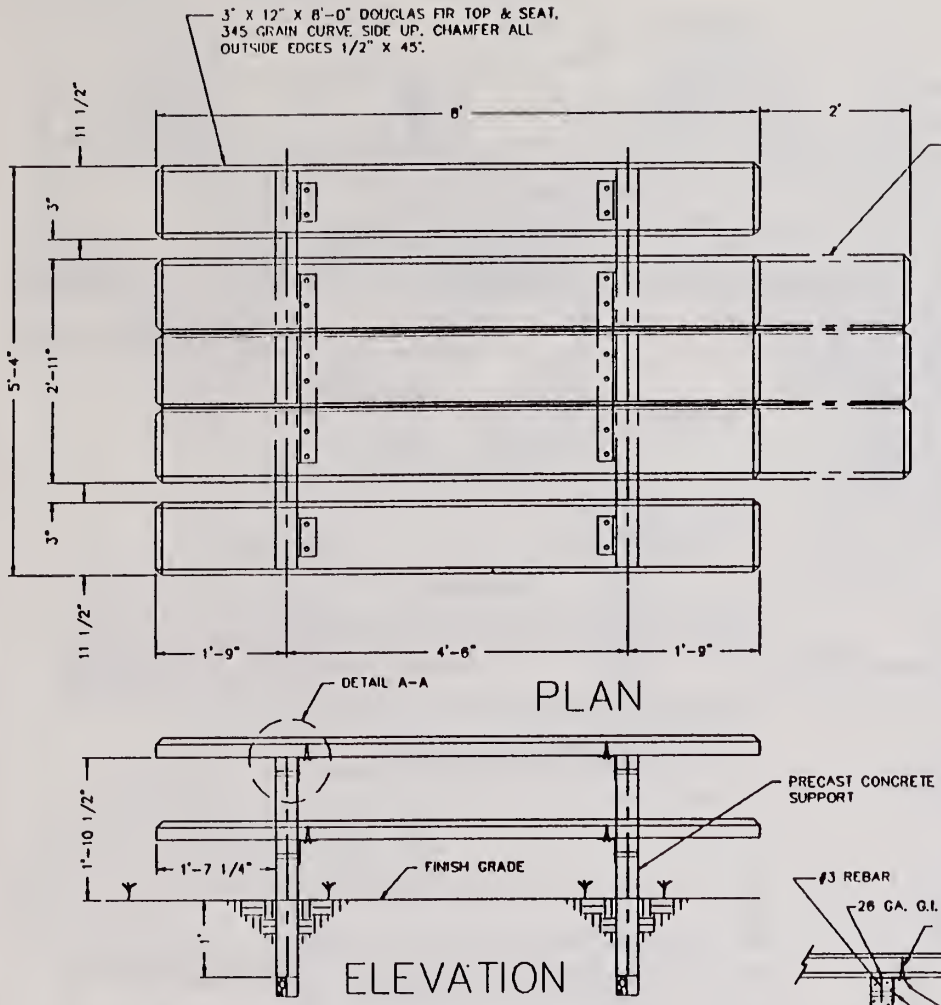
ELEVATION

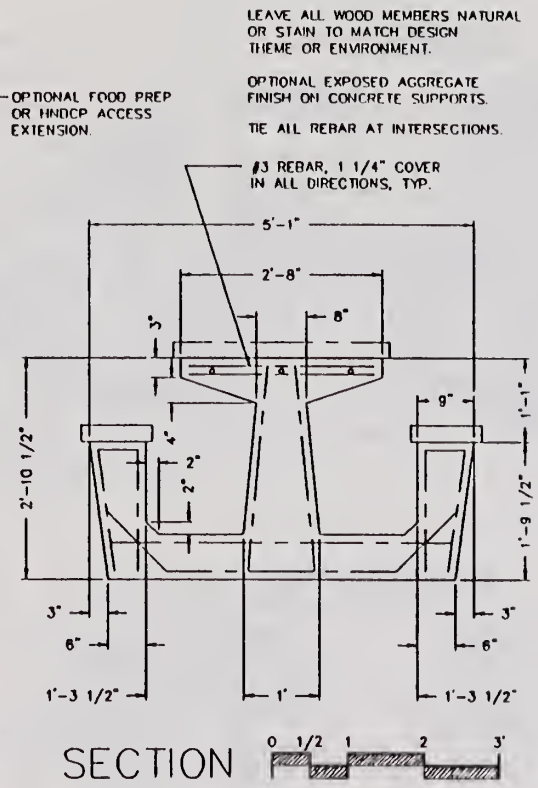
ELEVATION

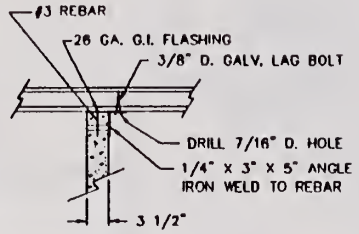
HEAVY PLANK PICNIC TABLE

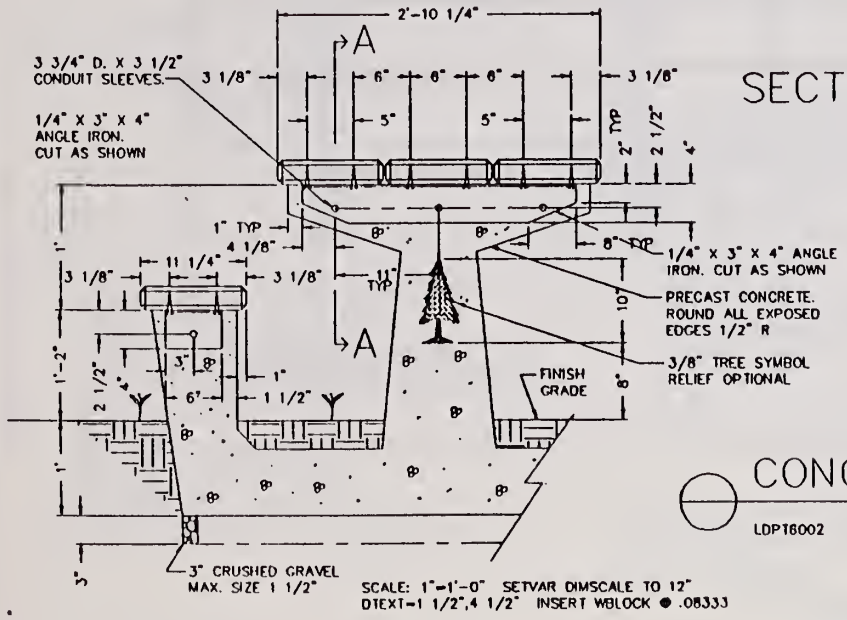
LDPT6001 8-18-88

1 2 3'









NOTES

LEAVE ALL WOOD MEMBERS NATURAL OR STAIN TO MATCH DESIGN THEME OR ENVIRONMENT.

OPTIONAL EXPOSED AGGREGATE FINISH ON CONCRETE SUPPORTS.

TIE ALL REBAR AT INTERSECTIONS.

SCALE: 1"=1'-0" SETVAR DIMSCALE TO 12" DTEXT=1 1/2",4 1/2" INSERT WBLOCK ● .08333

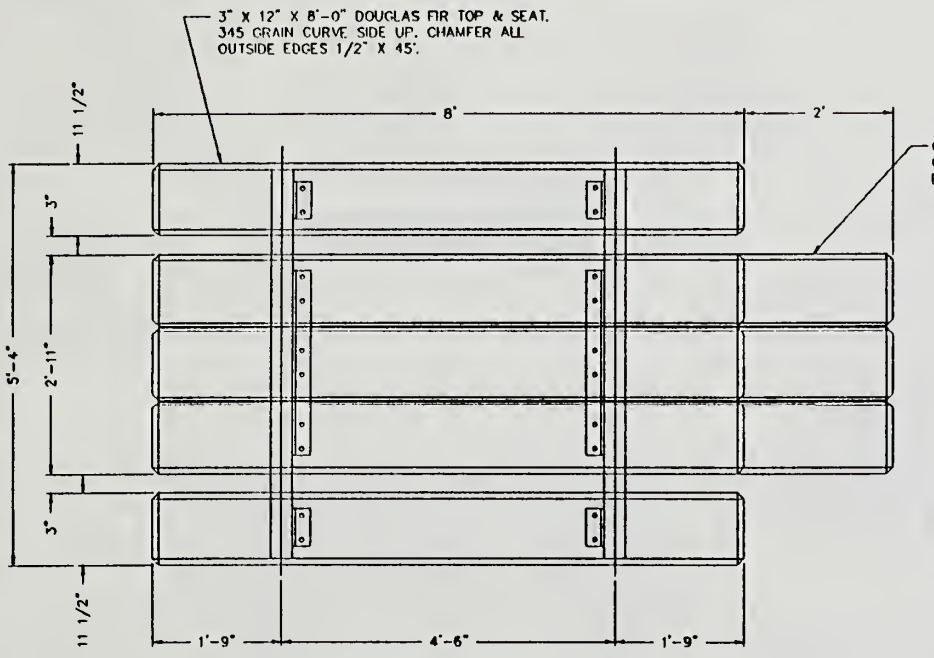
CONCRETE BASE PICNIC TABLE

LDPT6002 8-15-88

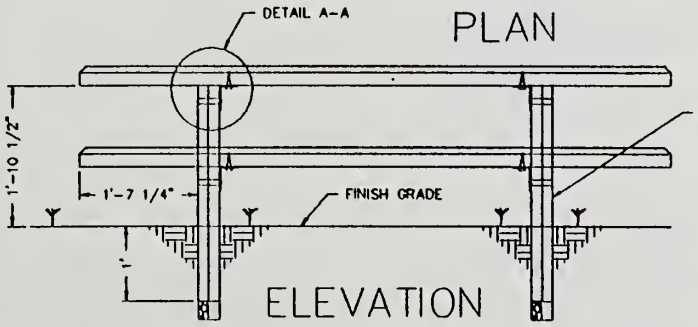
0 1/2 1 2 3'

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THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.



PLAN



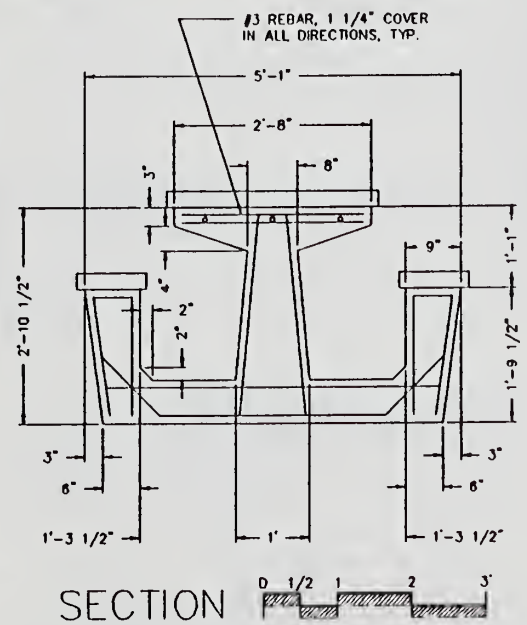
ELEVATION

NOTES

LEAVE ALL WOOD MEMBERS NATURAL OR STAIN TO MATCH DESIGN THEME OR ENVIRONMENT.

OPTIONAL EXPOSED AGGREGATE FINISH ON CONCRETE SUPPORTS.

TIE ALL REBAR AT INTERSECTIONS.

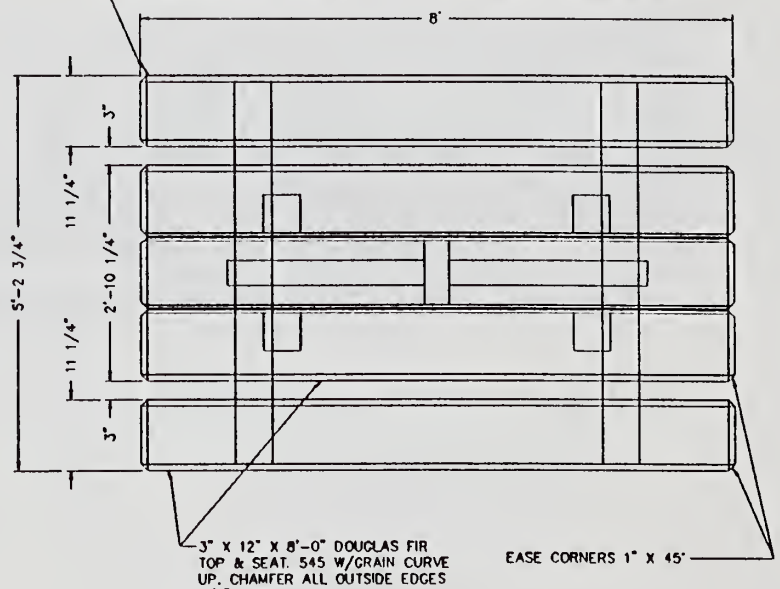


SECTION

NOTES

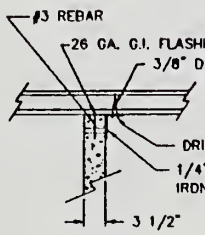
LEAVE ALL WOOD MEMBERS NATURAL OR STAIN TO MATCH DESIGN THEME OR ENVIRONMENT.

3" X 12" X 8'-0" DOUGLAS FIR TOP & SEAT. 345 GRAIN CURVE SIDE UP. CHAMFER ALL OUTSIDE EDGES 1/2" X 45".

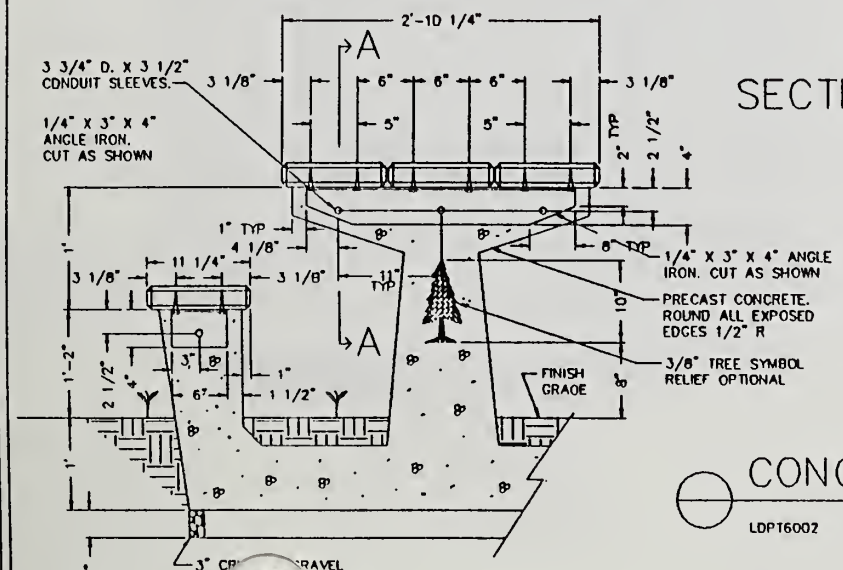


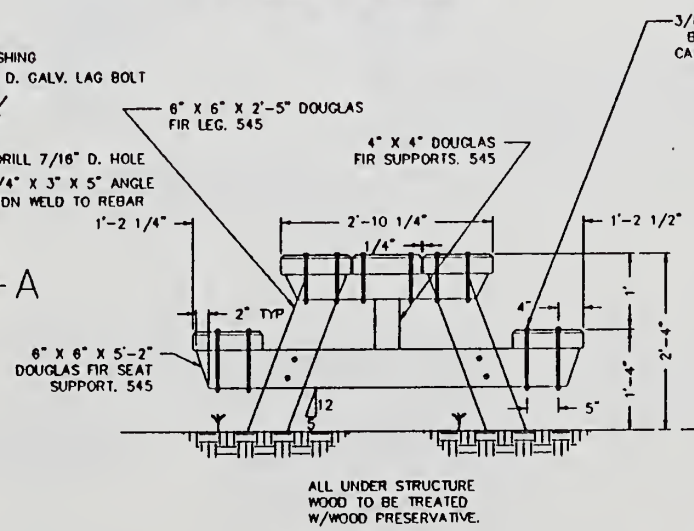
3" X 12" X 8'-0" DOUGLAS FIR TOP & SEAT. 545 W/GRAIN CURVE UP. CHAMFER ALL OUTSIDE EDGES 1/2" X 45"
DO NOT USE CHEMICALLY TREATED WOOD ON TOP AND SEATS.

PLAN

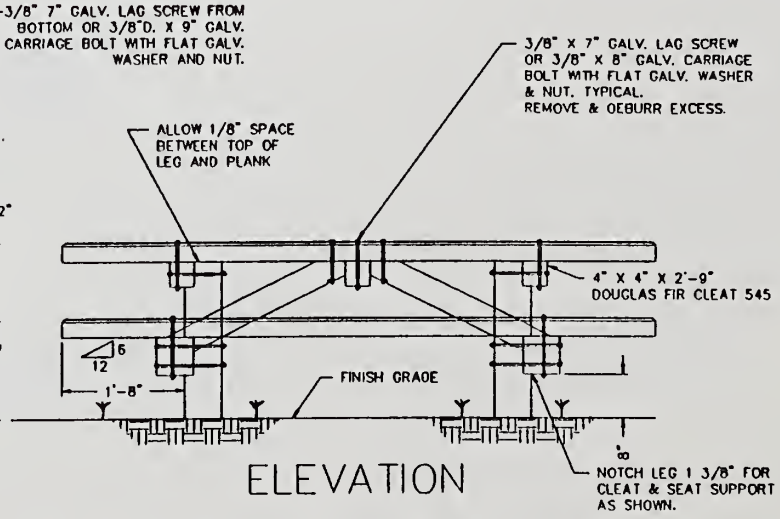


SECTION A-A





ELEVATION



ELEVATION

HEAVY PLANK PICNIC TABLE

LDPT6001 8-18-88

D 1/2 1 2 3'

CONCRETE BASE PICNIC TABLE

LDPT6002 8-15-88

D 1/2 1 2 3'

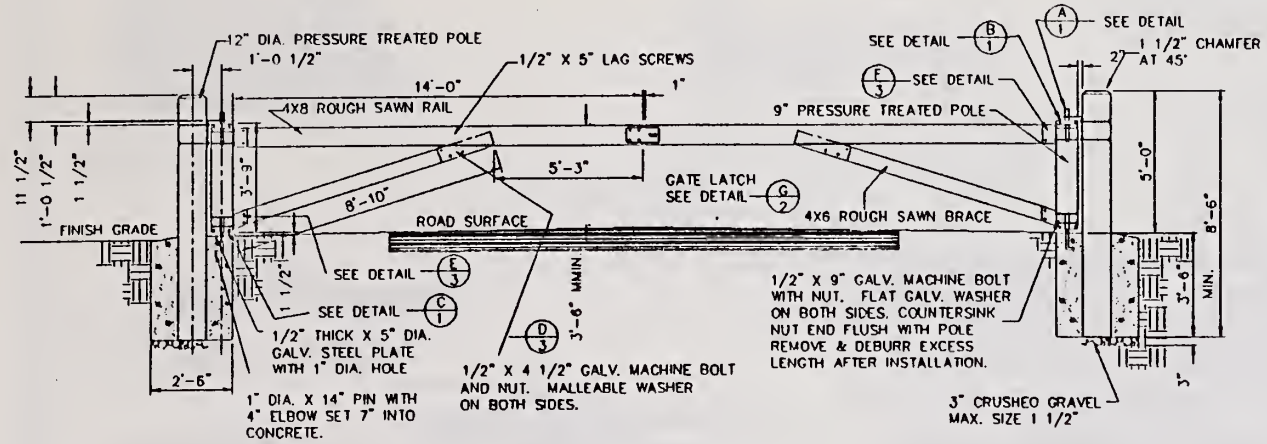
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

DRAWN RLCARTER DATE 8-23-88
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

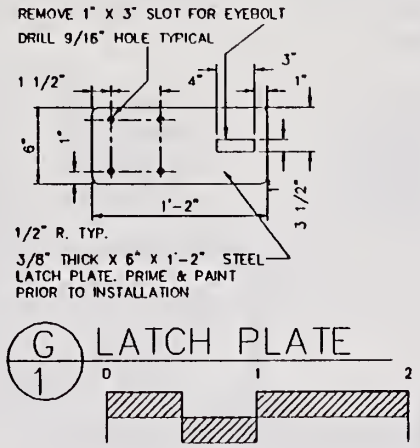
TABLE DETAILS
8-23-88

RECO

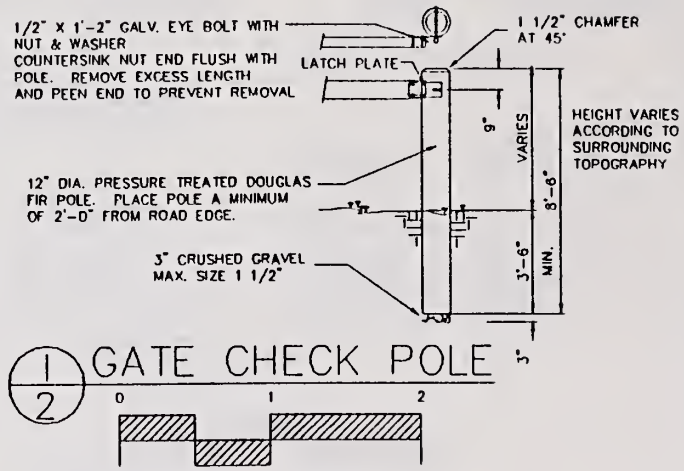
SHT.
OF



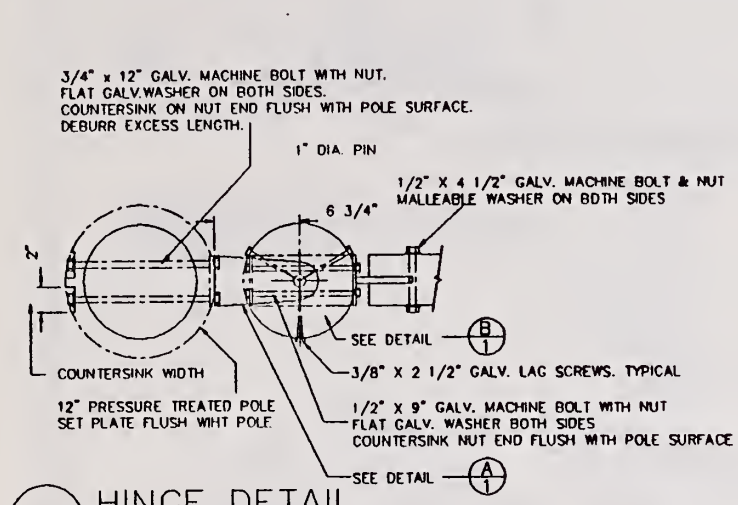
ELEVATION



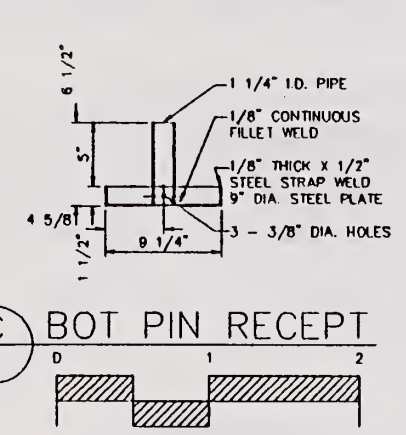
G/1 LATCH PLATE



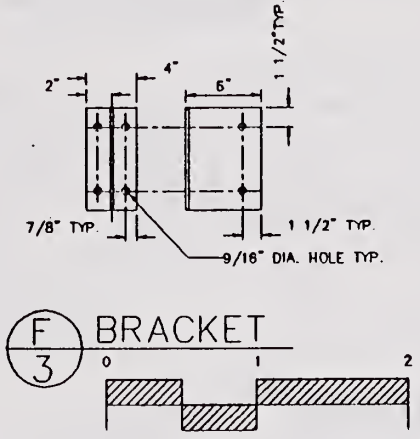
1/2 GATE CHECK POLE



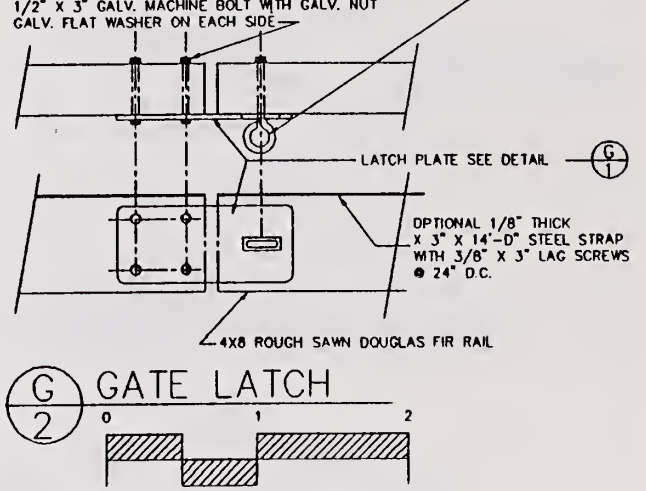
HINGE DETAIL



C/1 BOT PIN RECEPT



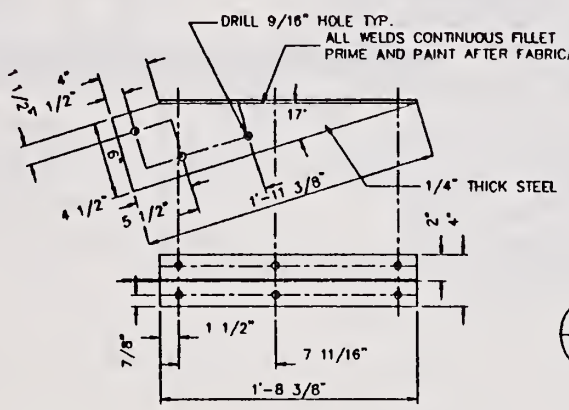
F/3 BRACKET



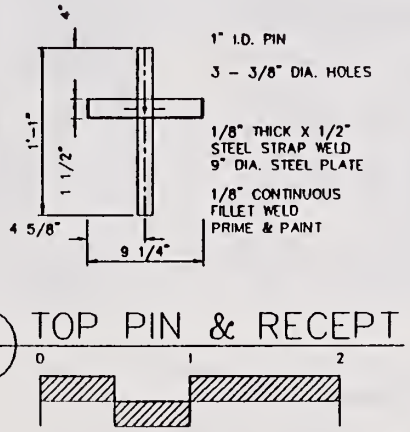
G/2 GATE LATCH

NOTES:

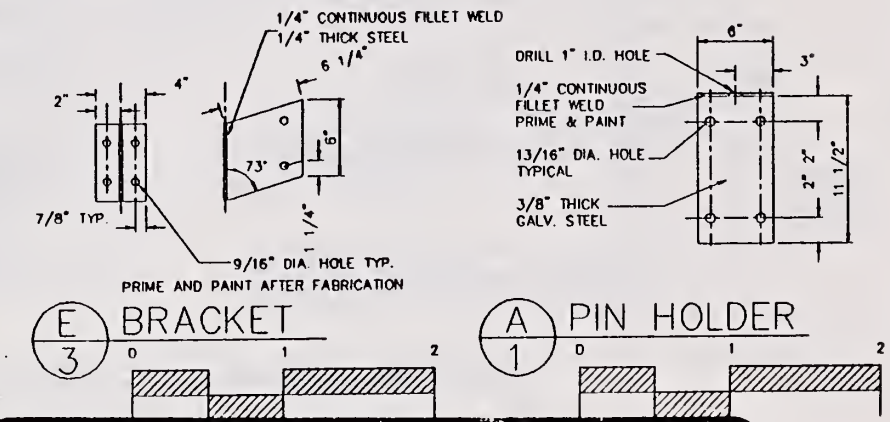
- FINISHES:
  - 12" POLES – OLYMPIC SOLID COLOR STAIN NEW YORK BARK OR APPROVED EQUIVALENT.
  - 9" POLES – OLYMPIC SOLID COLOR STAIN BUTTERNUT OR APPROVED EQUIVALENT.
  - 4X6'S & 4X8'S – OLYMPIC SOLID COLOR STAIN BUTTERNUT OR APPROVED EQUALAVENT.
  - OPTIONAL ROUTED DESIGN – RODDA ACRYLIC LATEX (EXTERIOR) COLOR #1-4-7W. SEMI-GLOSS OR APPROVED EQUIVALENT.
  - METAL FITTINGS & BRACKETS – 2 COATS RUST INHIBITIVE PRIMER – 2 COATS SEMI-GLOSS ENAMEL TO MATCH OLYMPIC SOLID COLOR STAIN BUTTERNUT OR APPROVED EQUIVALENT.
- DR APPROVED COLOR SCHEME TO MATCH PROJECT THEME.



D/3 BRACKET



B/1 TOP PIN & RECEPT



E/3 BRACKET

A/1 PIN HOLDER

WOOD GATE

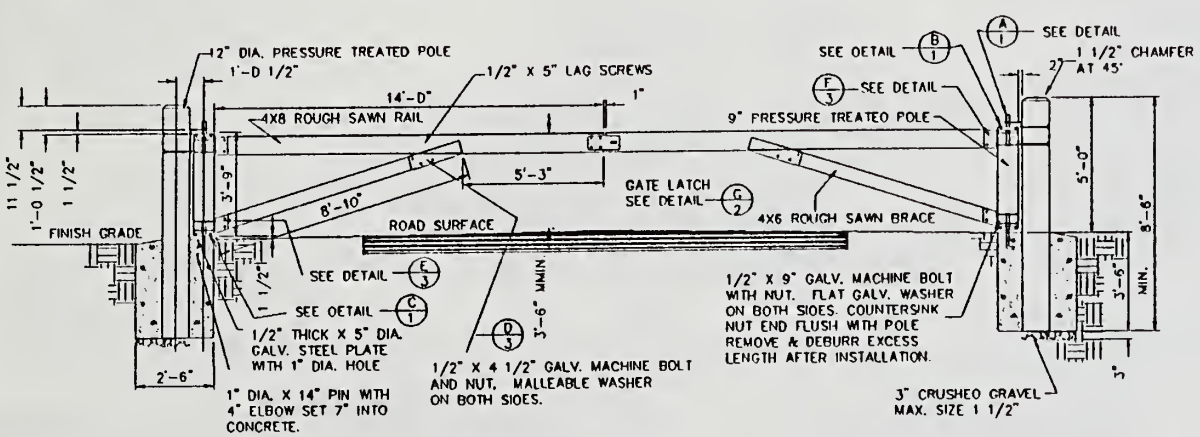
LDGA6001

AUGUST 21,1988

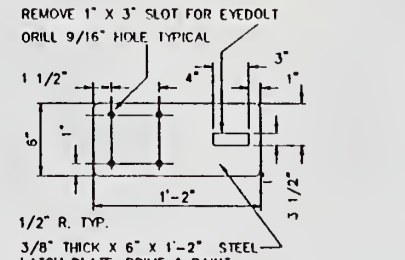
0 1 2 3'

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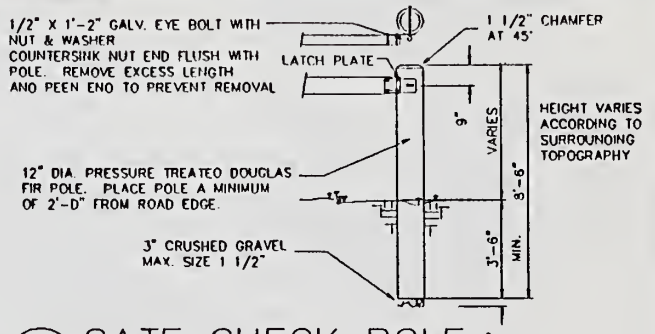
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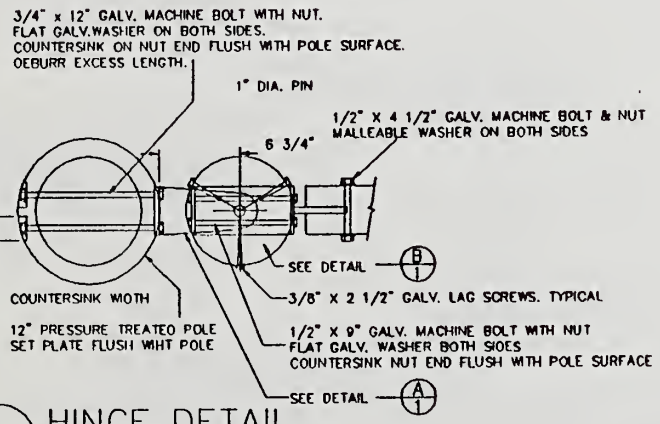
ELEVATION



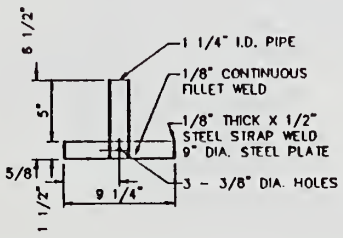
G/1 LATCH PLATE



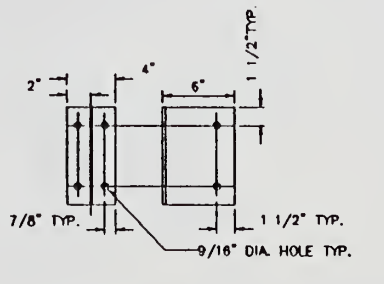
1/2 GATE CHECK POLE



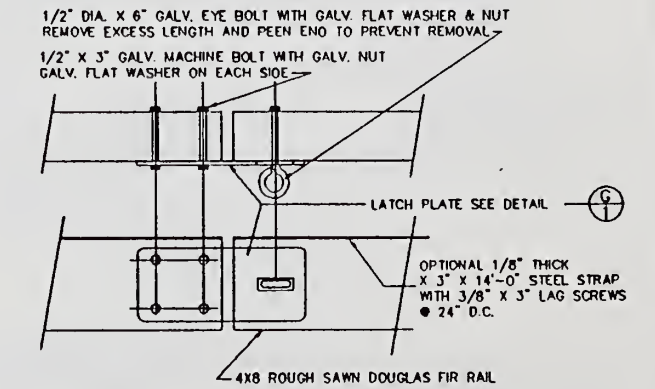
HINGE DETAIL



C/1 BOT PIN RECEPT



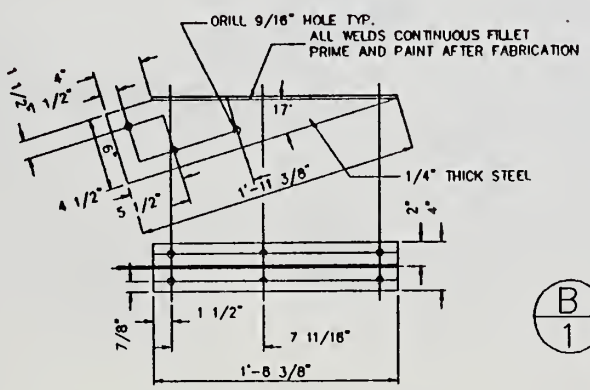
F/3 BRACKET



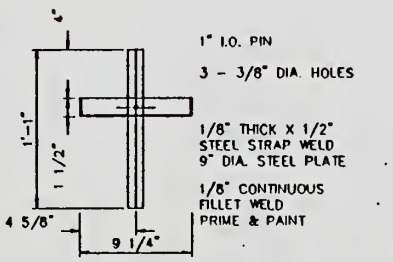
G/2 GATE LATCH

NOTES:

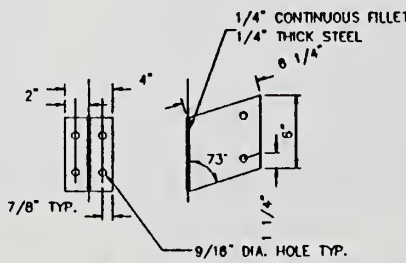
- FINISHES:
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- OR APPROVED COLOR SCHEME TO MATCH PROJECT THEME.



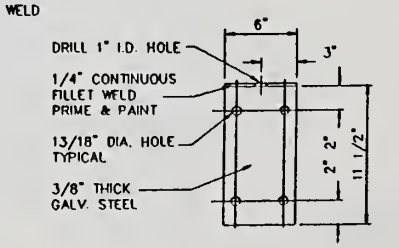
D/3 BRACKET



B/1 TOP PIN & RECEPT



E/3 BRACKET



A/1 PIN HOLDER

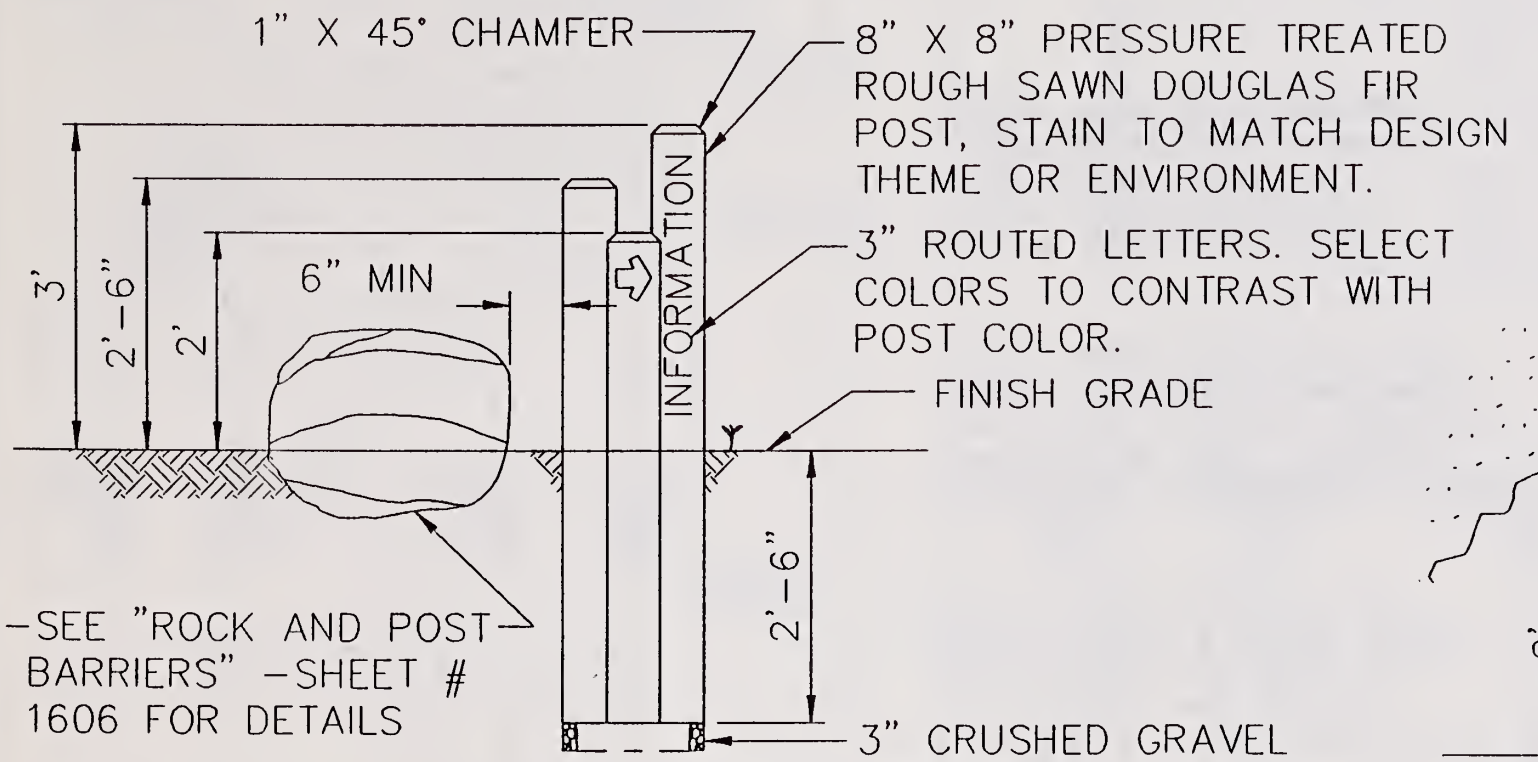
WOOD GATE

LDGA6001

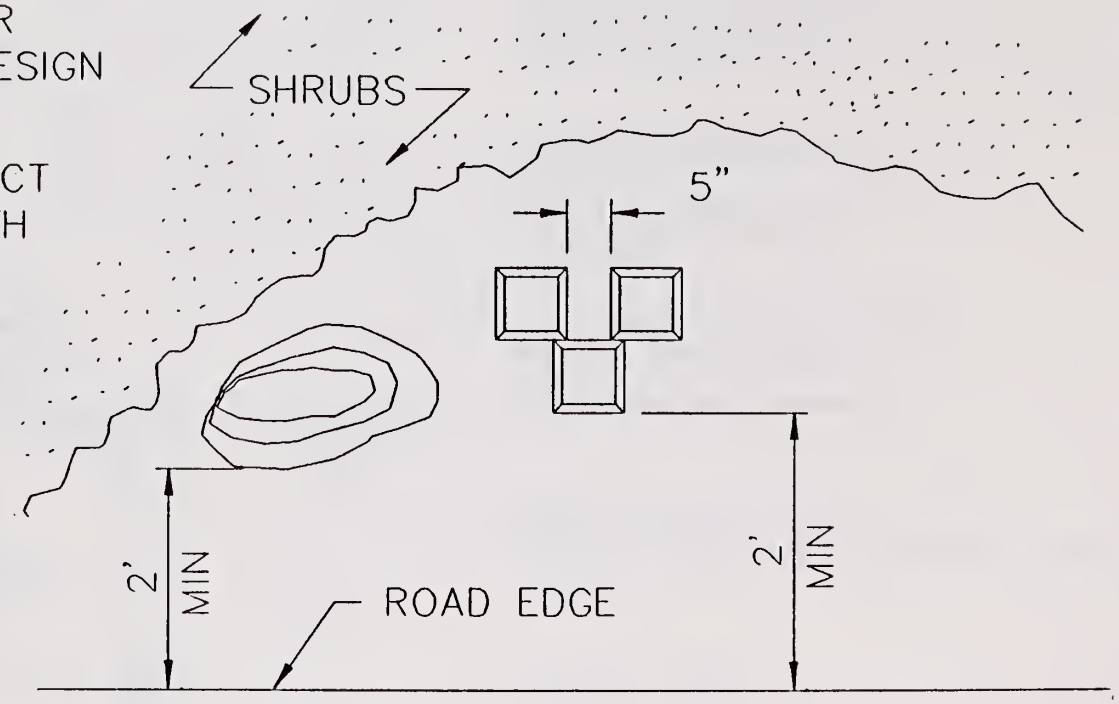
AUGUST 21 1988

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE THE PACIFIC NORTHWEST REGION DRAWN J.ROSSILLO DATE 8-23-88 DESIGN ____ DATE ____ CHECKED ____ DATE ____ REVIEWED ____ DATE ____	GATES (WOOD) 8-23-88 RECO SHT. OF

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ELEVATION

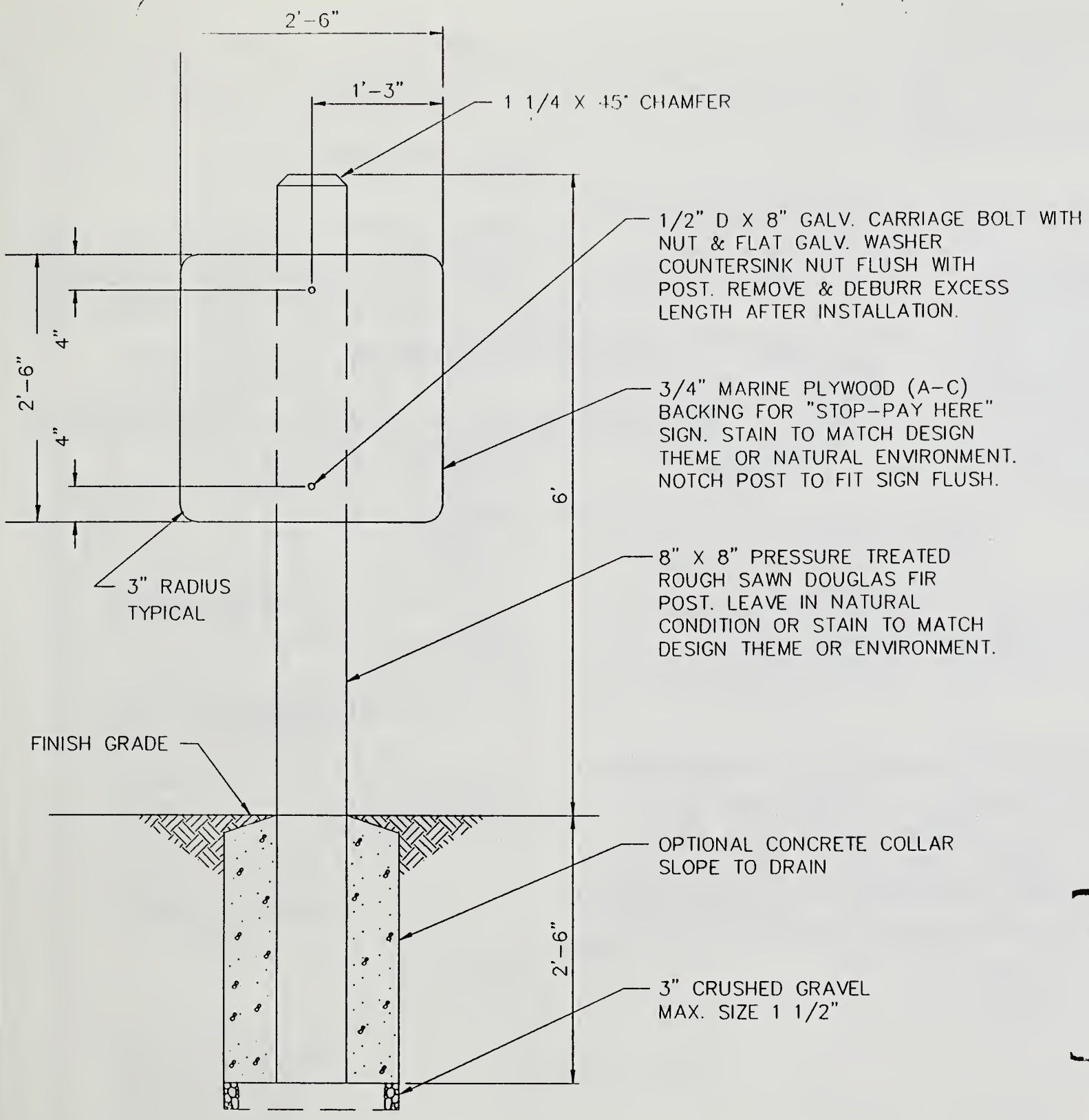


PLAN

0 0.5 1 2 3'

DIRECTIONAL INFORMATION SIGN

LDSI 6009 12-2-88



FRONT ELEVATION

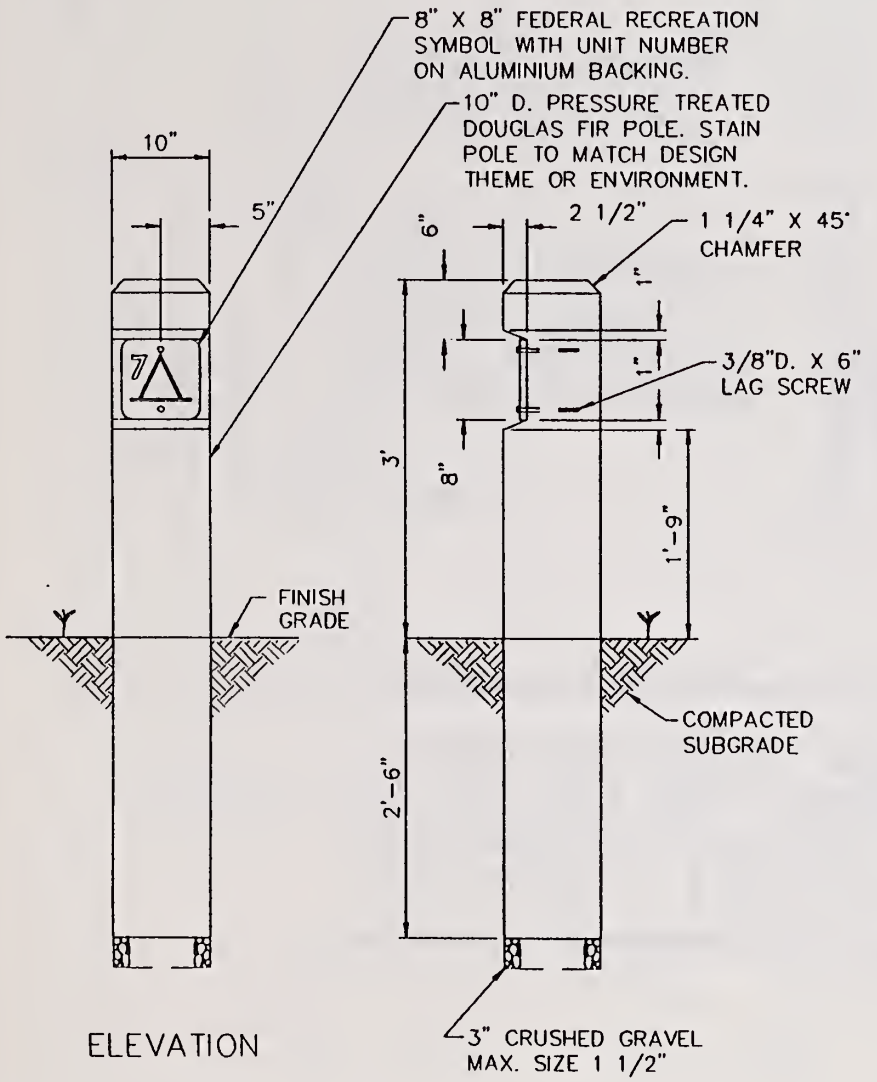
STOP PAY HERE SIGN

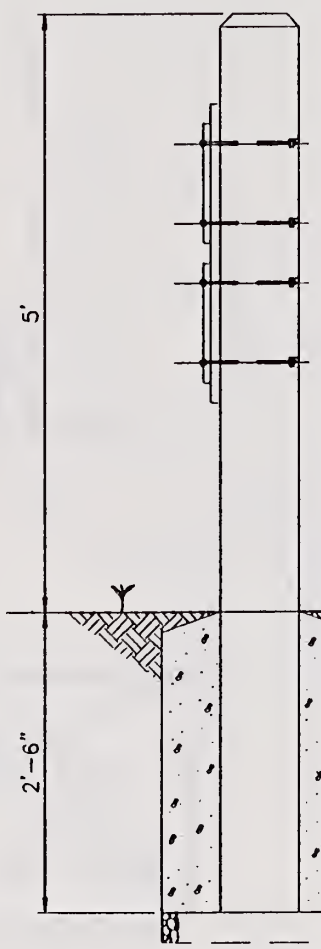
6005 12-2-88

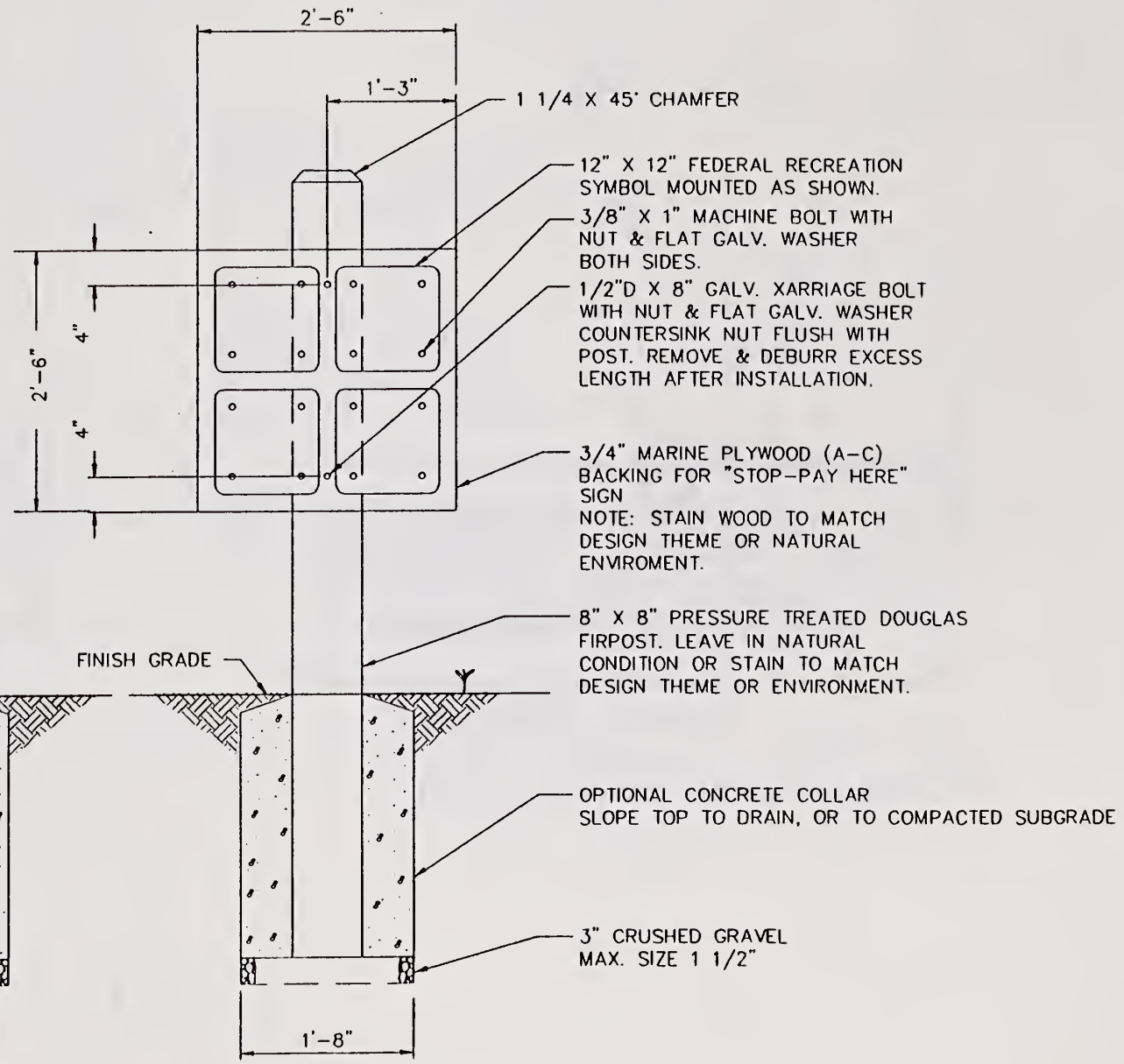
0 0.5 1 2 3'

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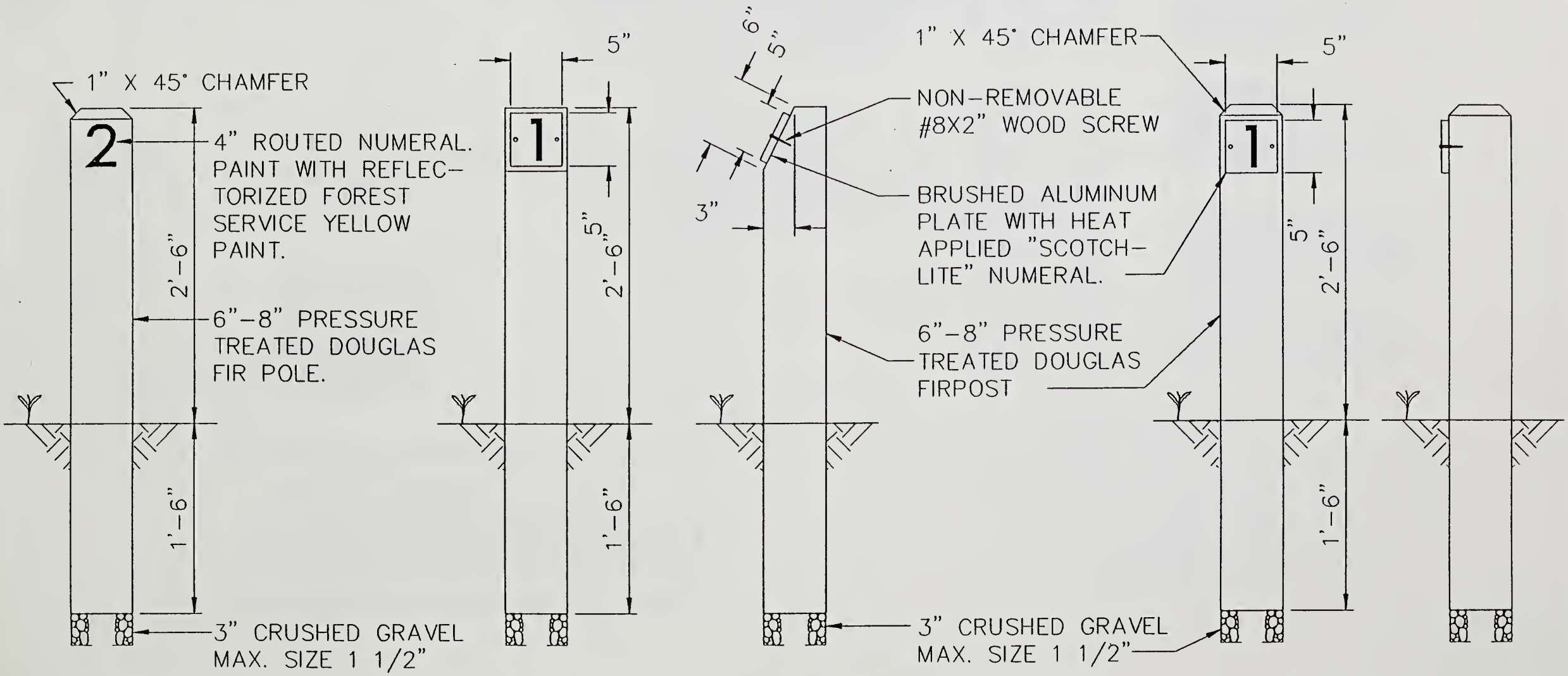
CAMP UNIT POST AND SYMBOL SIGN POST

LDSI 6003 12-2-88

0 0.5 1 2 3'

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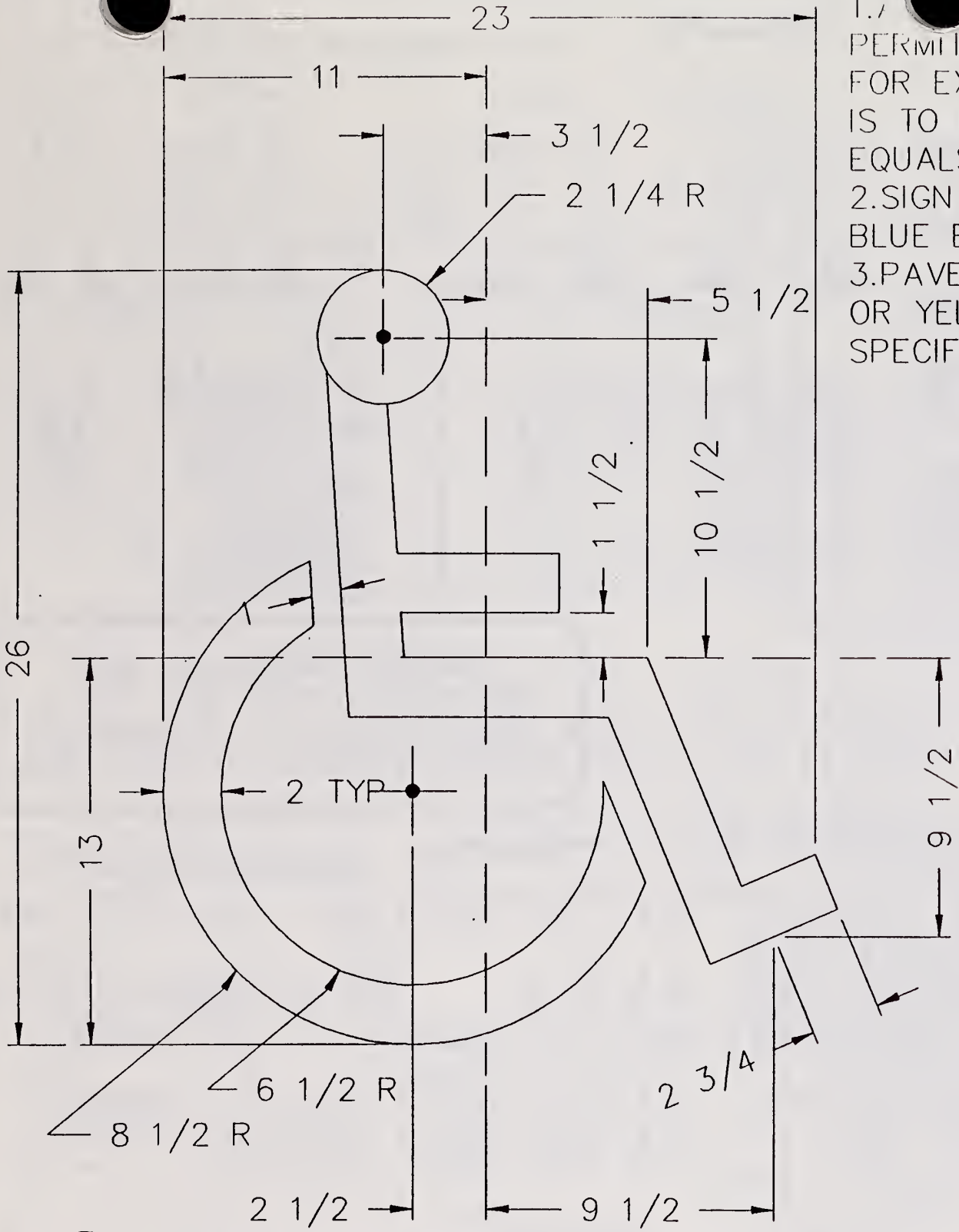
NOTE: ROUTED NUMERAL MAY BE SUBSTITUTED FOR "SCOTCH-LITE" ALUMINUM NUMBER.



CAMP UNIT NUMBER POSTS

LDSI 6002 12-5-88



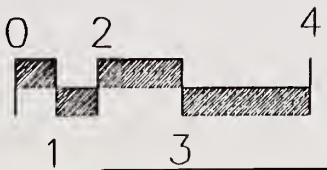


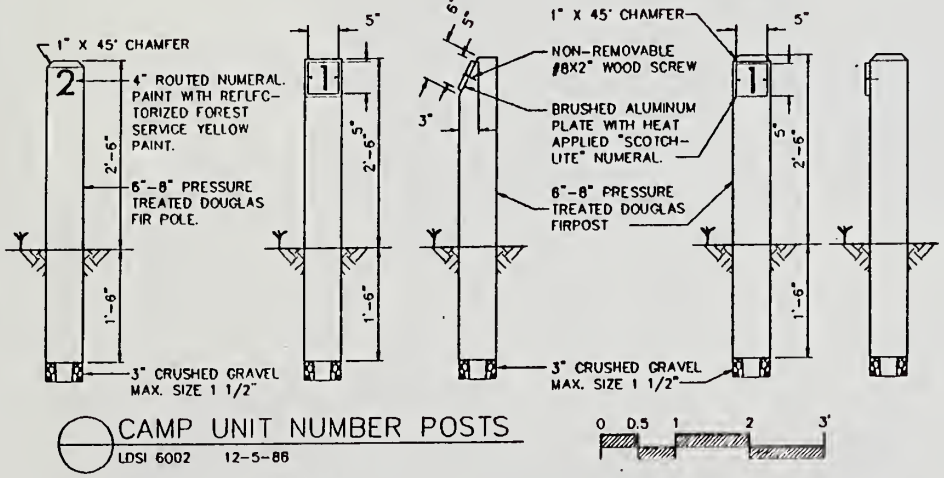
1. DIMENSIONS ARE IN "UNITS" TO PERMIT LAYOUT AT DESIRED SCALE. FOR EXAMPLE: IF THE FINAL FIGURE IS TO BE 4'–3 1/2" TALL, ONE UNIT EQUALS 2".
2. SIGN COLORS SHALL BE WHITE ON BLUE BACKGROUND.
3. PAVEMENT STRIPING SHALL BE WHITE OR YELLOW TRAFFIC PAINT, AS SPECIFIED ON PLANS.

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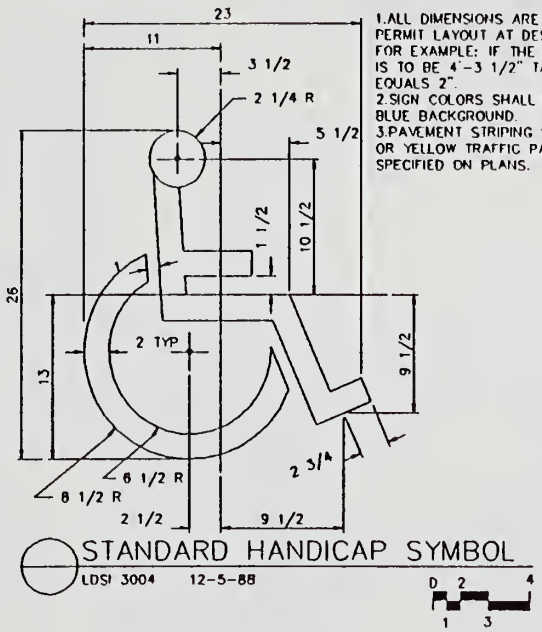
STANDARD HANDICAP SYMBOL

LDSI 3004 12-5-88

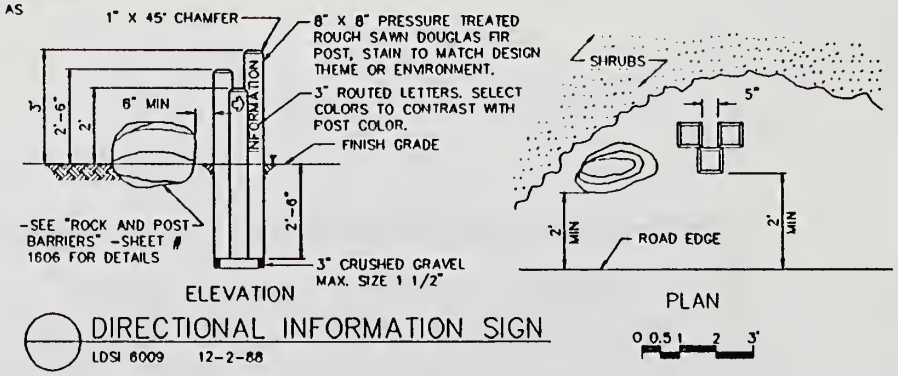




CAMP UNIT NUMBER POSTS
LDSI 6002 12-5-88

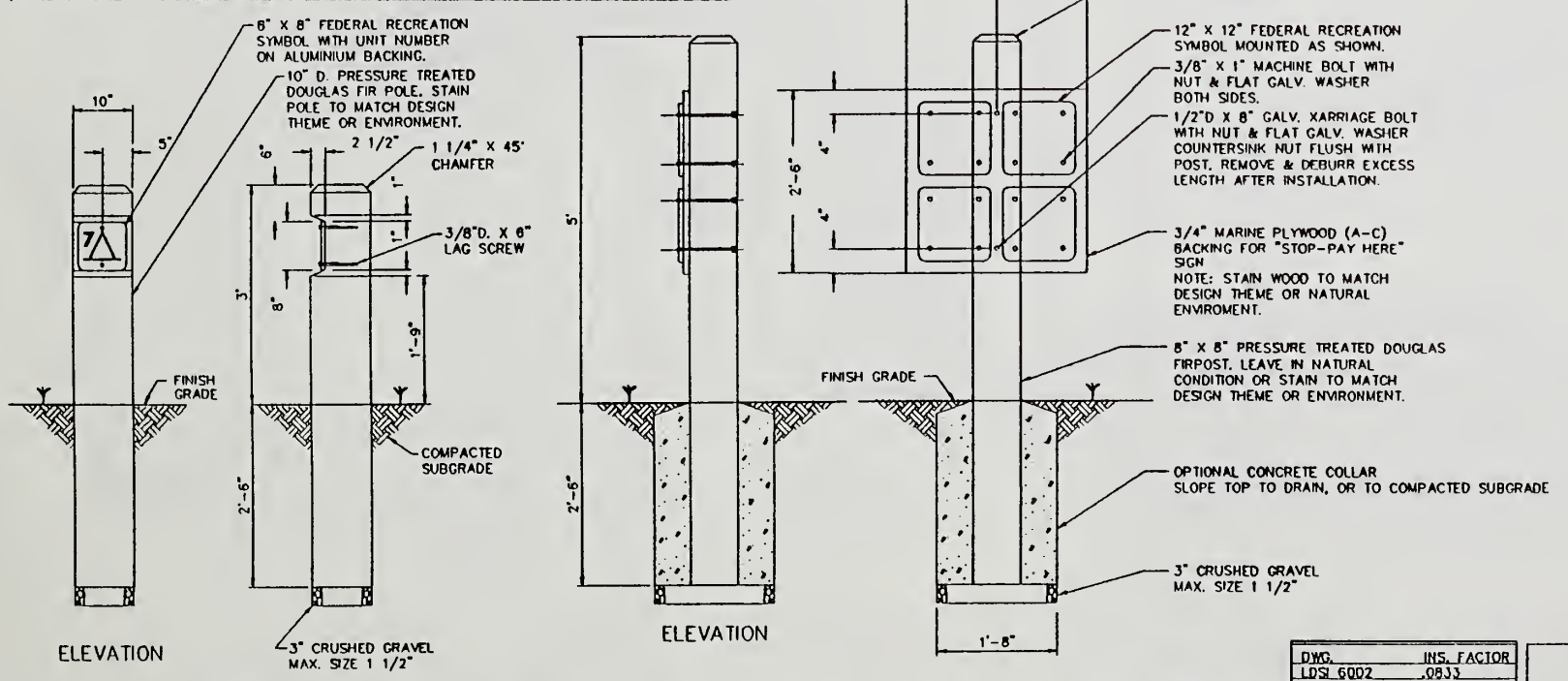


STANDARD HANDICAP SYMBOL
LDSI 3004 12-5-88



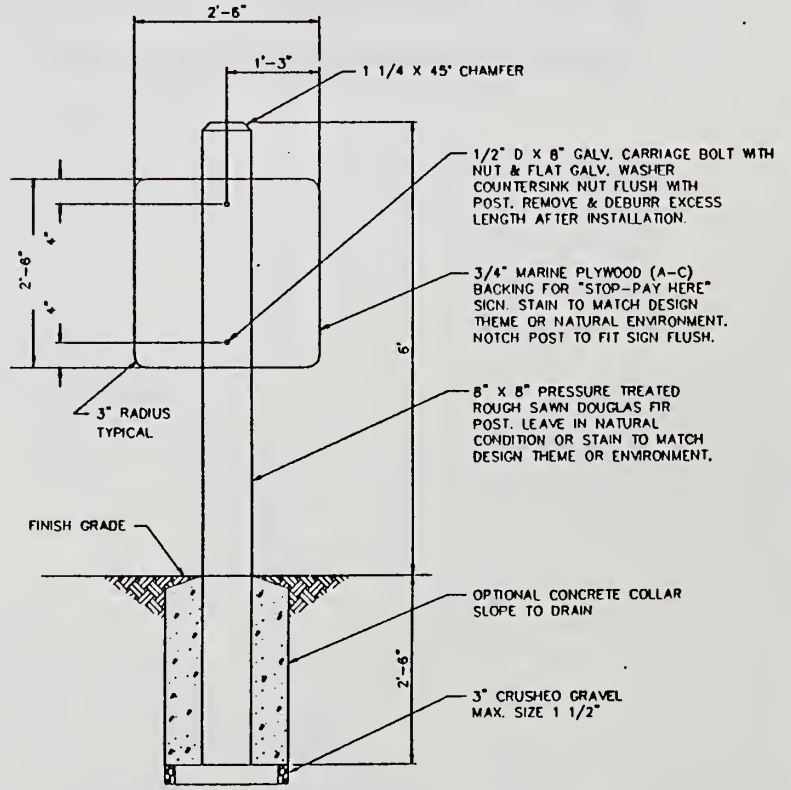
DIRECTIONAL INFORMATION SIGN
LDSI 6009 12-2-88

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.



CAMP UNIT POST AND SYMBOL SIGN POST
12-2-88

0 0.5 1 2 3'



STOP PAY HERE SIGN
LDSI 6005 12-2-88

0 0.5 1 2 3'

REC00011 12-5-88

DWG.	INS. FACTOR
LDSI 6002	.0833
LDSI 3004	.0833
LDSI 6009	.04166
LDSI 6005	.0833
LDSI 6003	.0833
THIS D-SIZE SHEET WAS PLOTTED AT 1 TO 1	

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

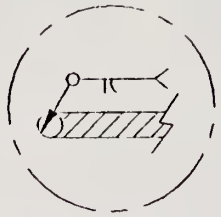
DRAWN	BRH	DATE 11-8-88
DESIGNED		DATE
CHECKED		DATE
REVIEWED		DATE

SIGNAGE #2

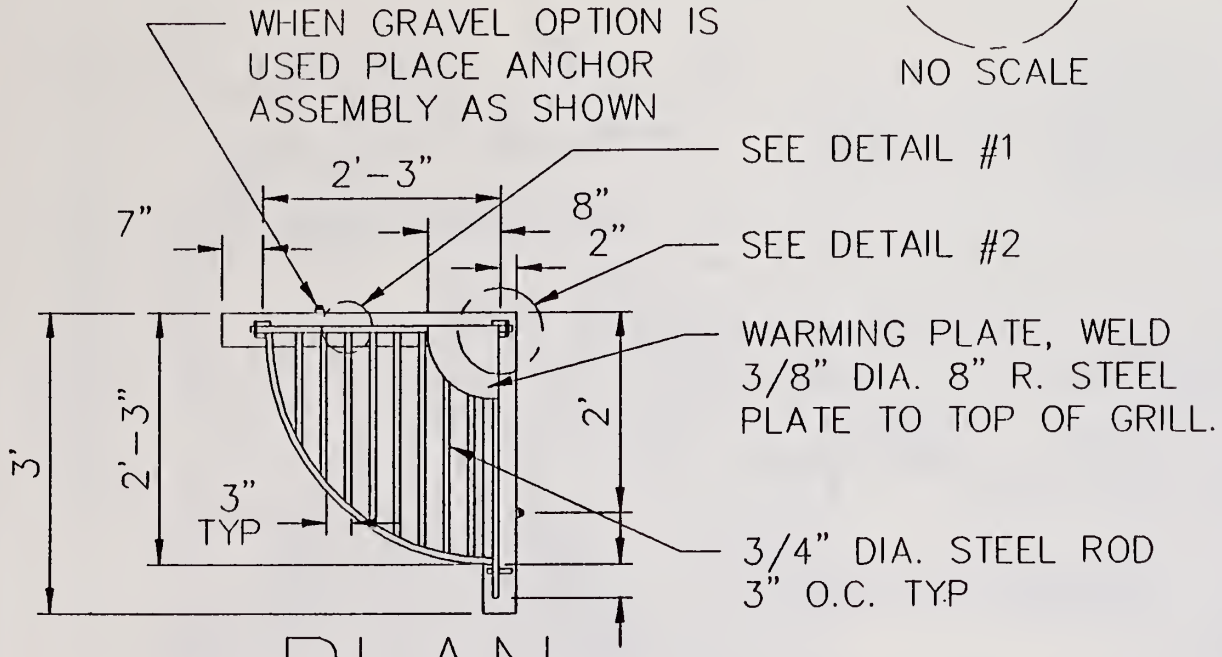
REC(1

SHT. 1
OF 1

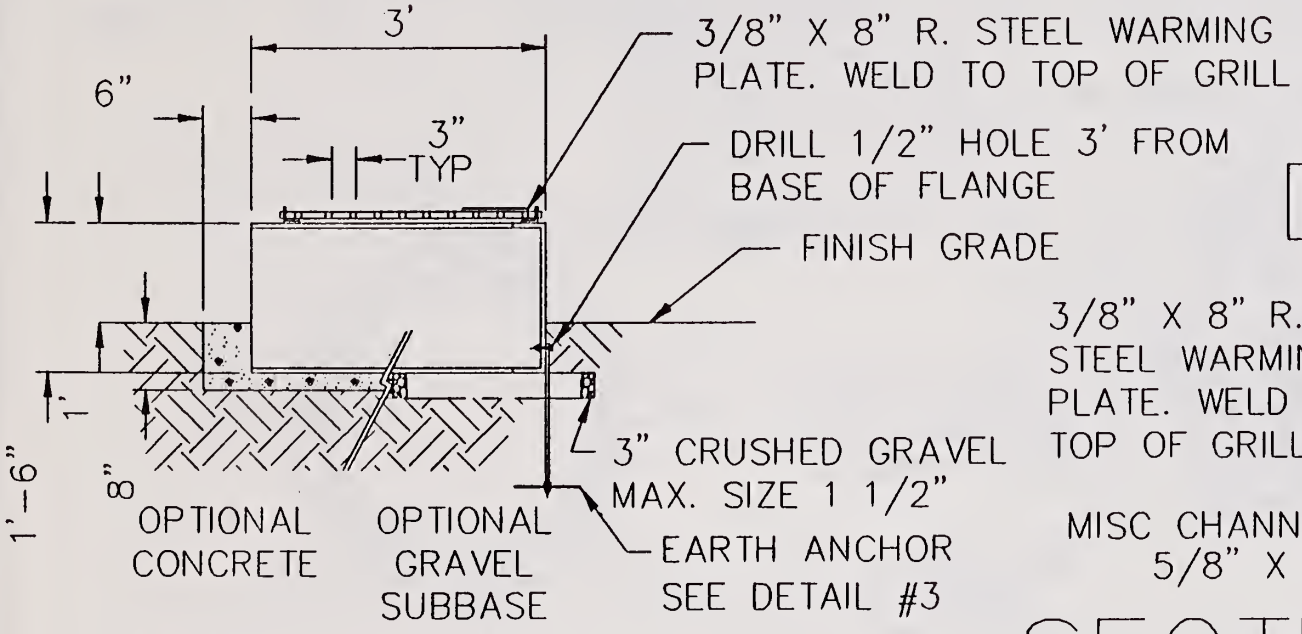
DETAIL 1



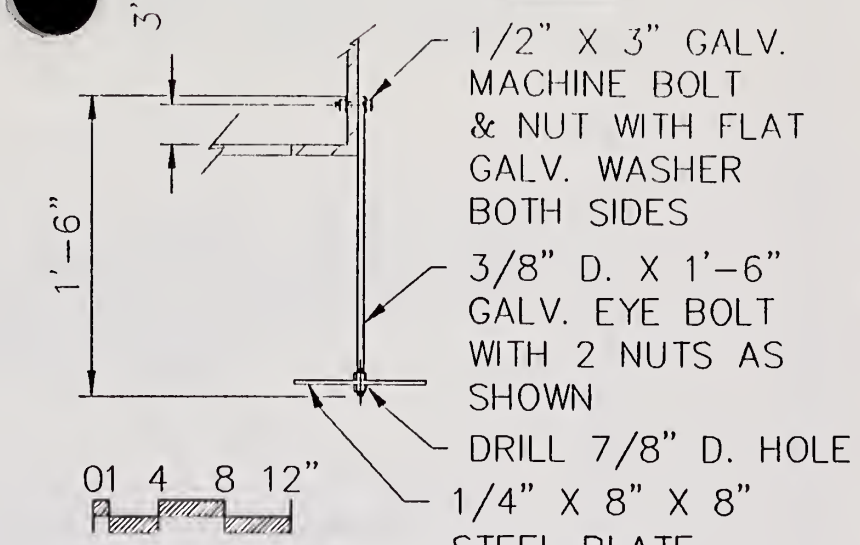
NO SCALE



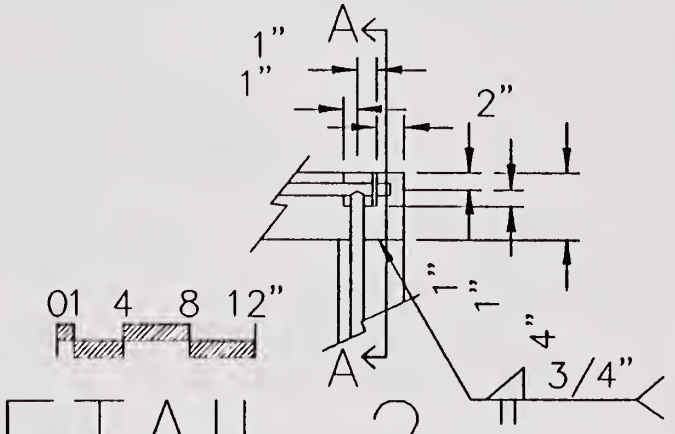
PLAN



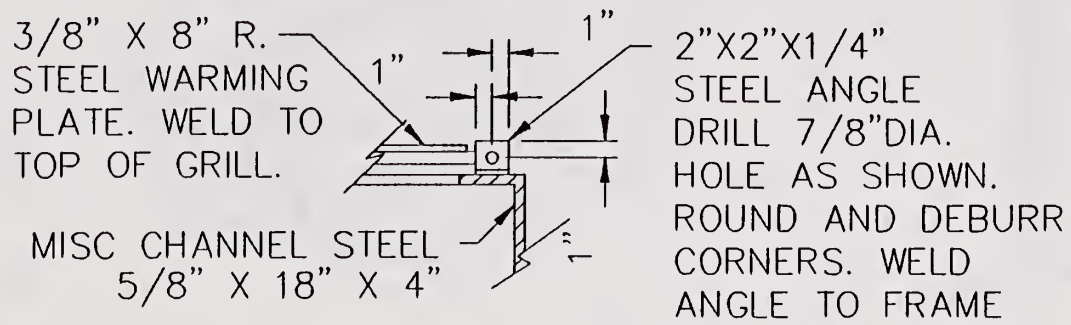
ELEVATION



DETAIL 3



DETAIL 2



SECTION A-A

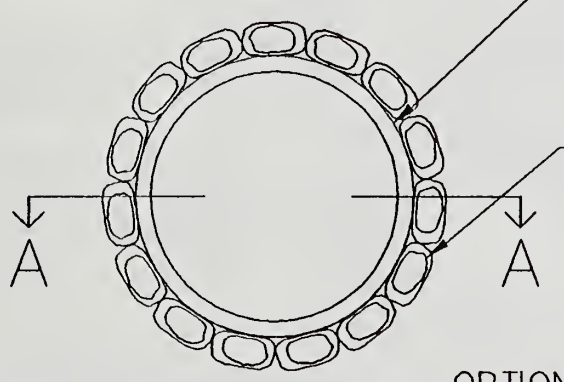
STEEL FLIP-TOP FIREPLACE

LDFP6005 8-26-88

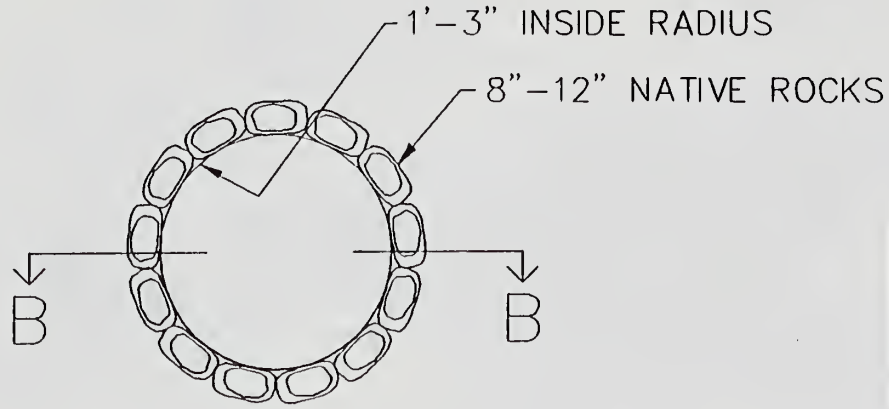
0 1 2 3'

SCALE: 1/2"=1'-0" SETVAR DIMSCALE TO 24"
DTEXT=3",9" INSERT WBLOCK @ .04166

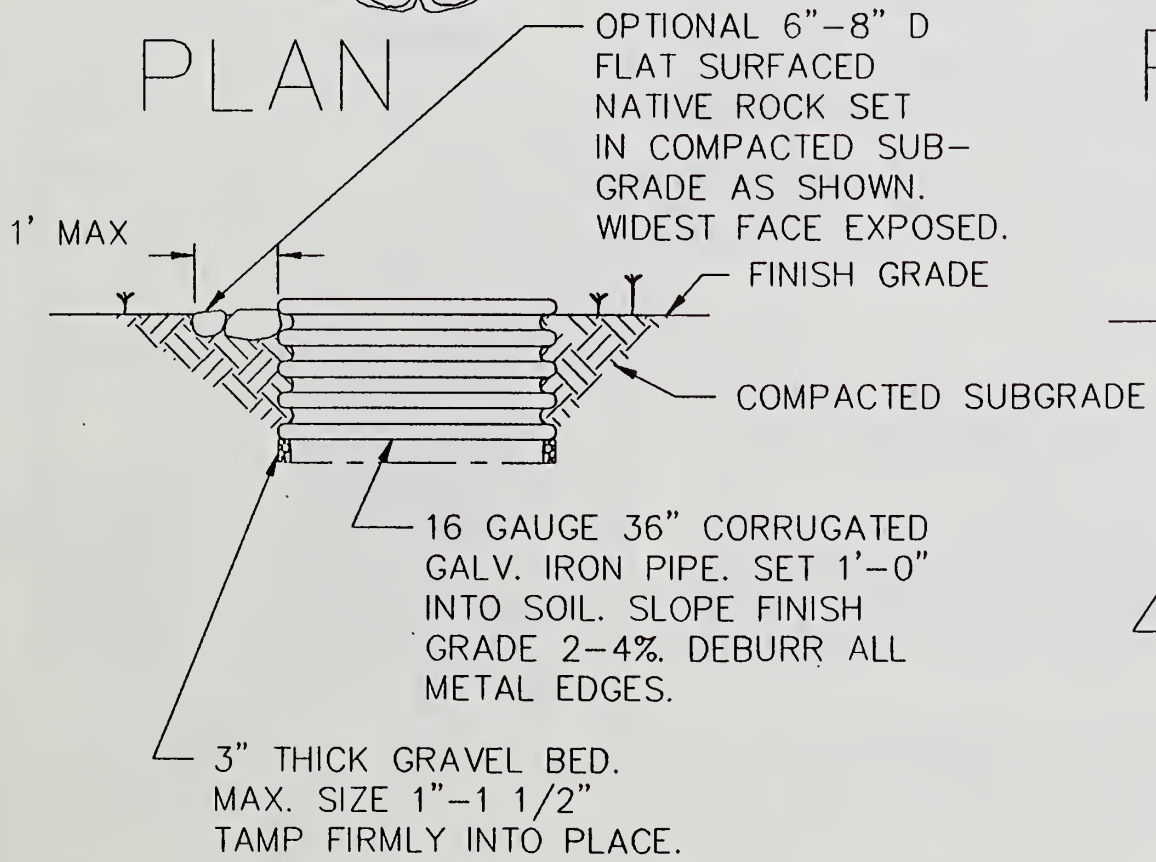
THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.



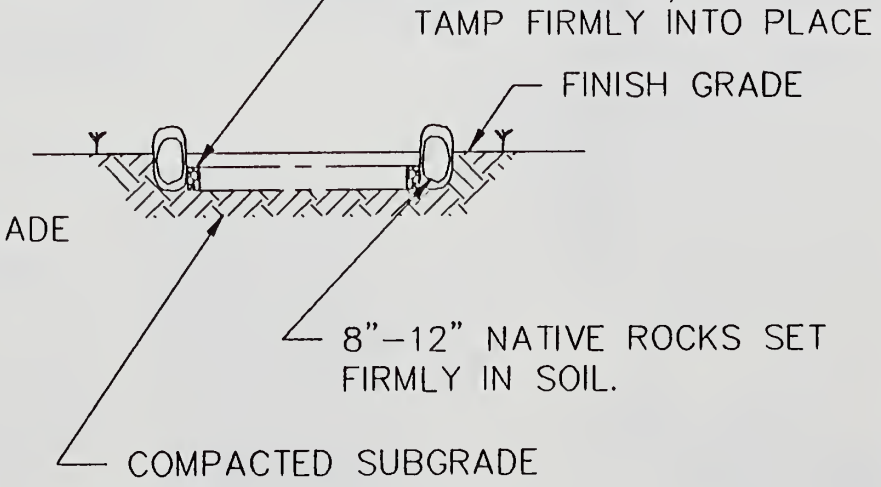
PLAN



PLAN



SECTION A–A



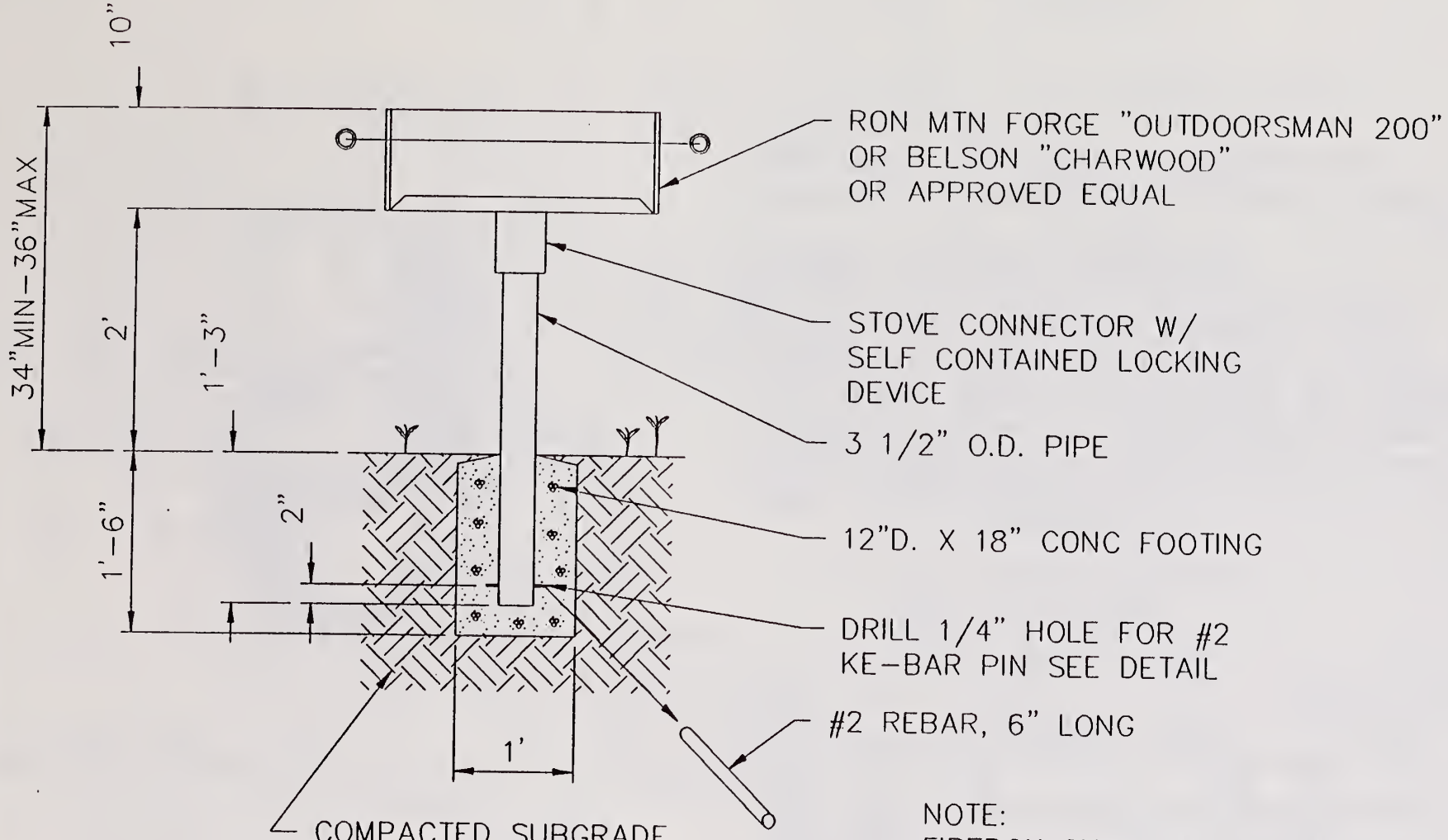
SECTION B–B

FIRE RINGS

FP6001 8–26–88 0 1 2 3'

SCALE: 1/2"=1'–0" SETVAR DIMSCALE TO 24"
DTEXT=3" INSERT WBLOCK @ .04166

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.



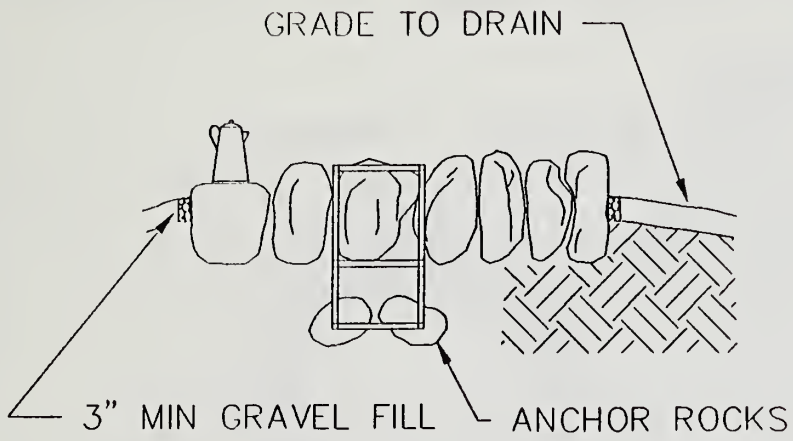
NOTE:
FIREBOX SHALL HAVE A LENGTH OF 20". A WIDTH OF 15" AND A HEIGHT OF 10" AND SHALL BE FABRICATED OF 3/16" STEEL PLATE. GRILL TO BE EQUIPPED WITH NON-CONDUCTIVE SPRING HANDLE GRIPS.

PEDESTAL GRILL

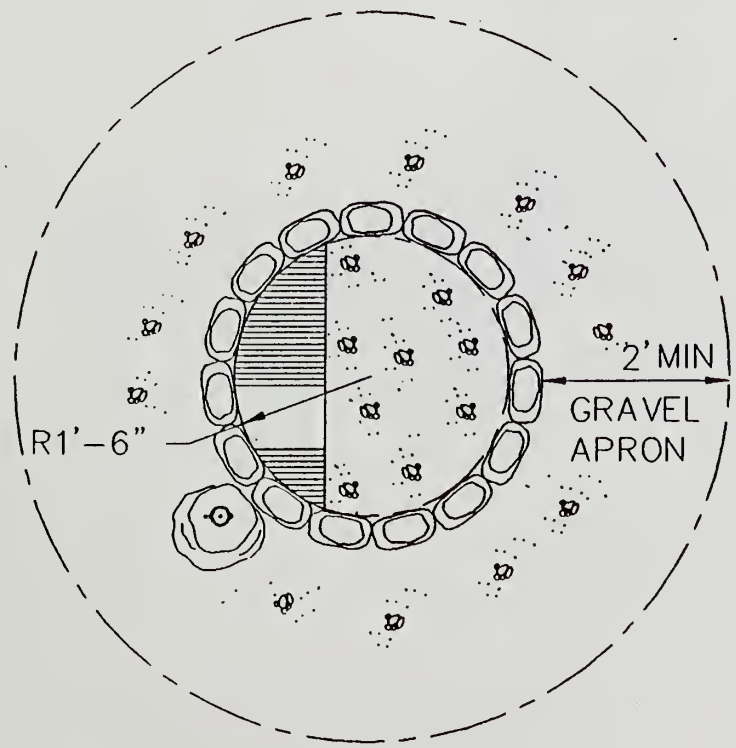
LDFP5004 8-26-88 0 1/2 1 2 3'

SCALE: 3/4"=1'-0" SETVAR DIMSCALE TO 16"
DTEXT=2",6" INSERT WBLOCK @ .0625

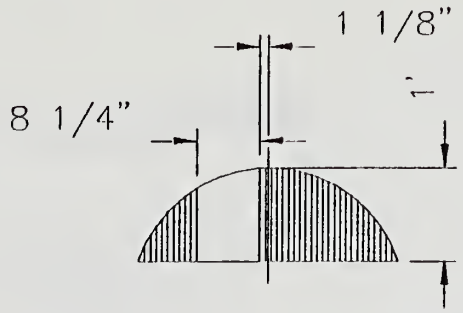
THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.



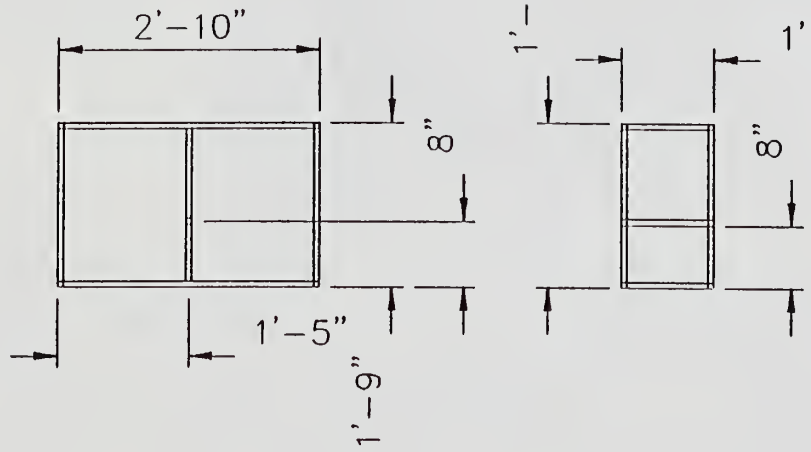
ELEVATION



PLAN



GRILL NOTES:
- GRILL BARS 3/4" X 3/4" SQUARE STOCK
- STEEL GRILL PLATE 1/4" THK
- RADIUS EDGE 1/4" THK X 2" STRAP STEEL
- ALL OTHER FRAMEWORK 1"X1" X 1/4" ANGLE IRON
- ALL JOINTS THROUGHOUT TO BE WELDED



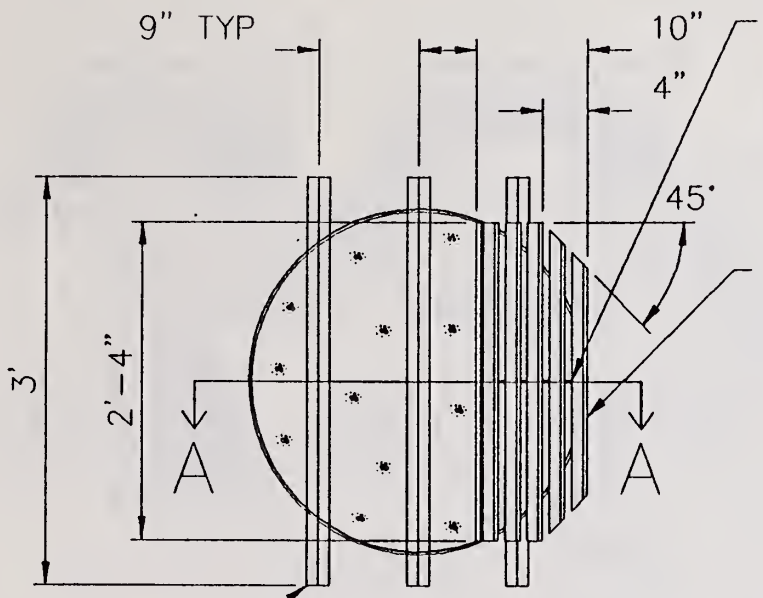
FIRE RING NOTES:
ROCKS SHOULD BE NATURAL, UNBROKEN, AND BURIED A MINIMUM OF 1/3 TO 1/2 OF THEIR SIZE. ROCKS SHOULD BE SELECTED AND ARRANGED TO GIVE A NATURAL RUSTIC EFFECT. AS FEW AND AS LARGE ROCKS AS POSSIBLE SHOULD BE USED. GRILL BAR SURFACE SHOULD BE LOCATED 9" ABOVE GROUND LINE.

APPROVED FOR USE ONLY IN PRIMATIVE AND SEMI-PRIMATIVE SITES. (EXPERIENCE LEVEL 1 AND 2).

STEEL GRATE FIRE RING

FP8002 8-26-88 0 1 2 3' SCALE: 1/2"=1'-0" SETVAR DIMSCALE TO 24"
DTEXT= INSERT WBLOCK @ .04166

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

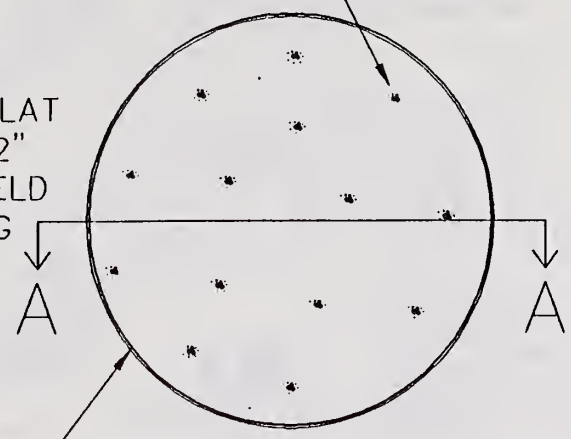


3/8" X 1" FLAT BAR STEEL, 9 3/4" LONG WELD TO TOP OF PLATES

3/8" X 1" FLAT BAR STEEL 2" O.C. TYP. WELD TO FIRE RING

1" X 1" X 1/8" STEEL ANGLE CLEAT 3' LONG. WELD TO BOTTOM OF FIRE RING AS SHOWN.

PLAN A



ROLL & WELD 1/8" PLATE PLATE ≙ 9.5' LONG.

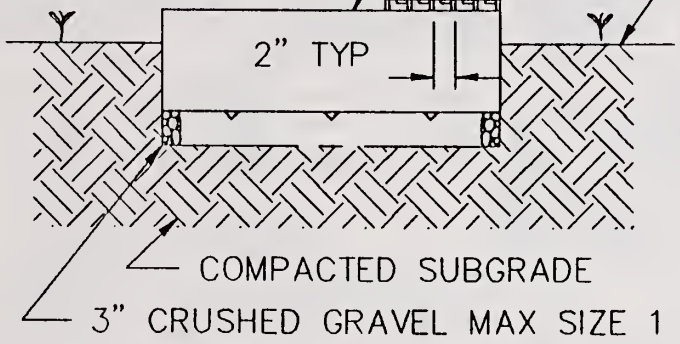
PLAN B

1/4" STEEL PLATE. 2'-6" INSIDE DIA DEBURR EDGES

3/8" X 1" FLAT BAR STEEL. WELD 2" O.C. TYP

FINISH GRADE

2" TYP

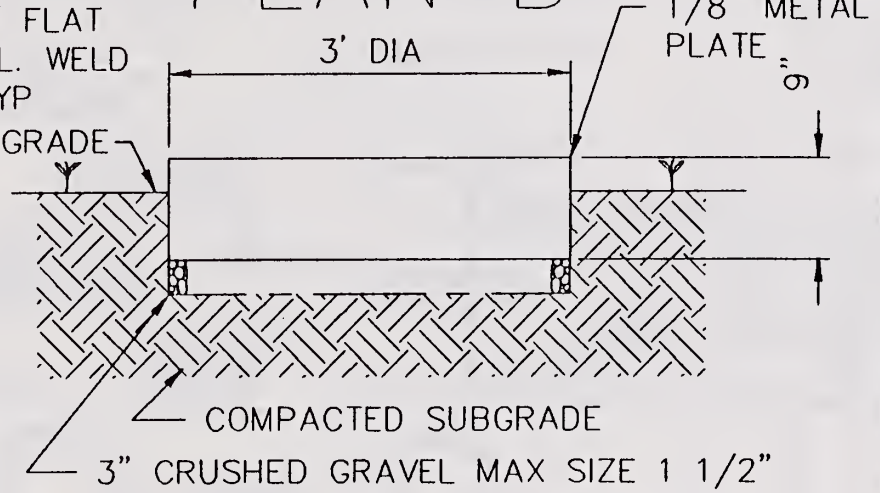


COMPACTED SUBGRADE

3" CRUSHED GRAVEL MAX SIZE 1 1/2"

SECTION A-A

FIRE RINGS



COMPACTED SUBGRADE

3" CRUSHED GRAVEL MAX SIZE 1 1/2"

SECTION A-A

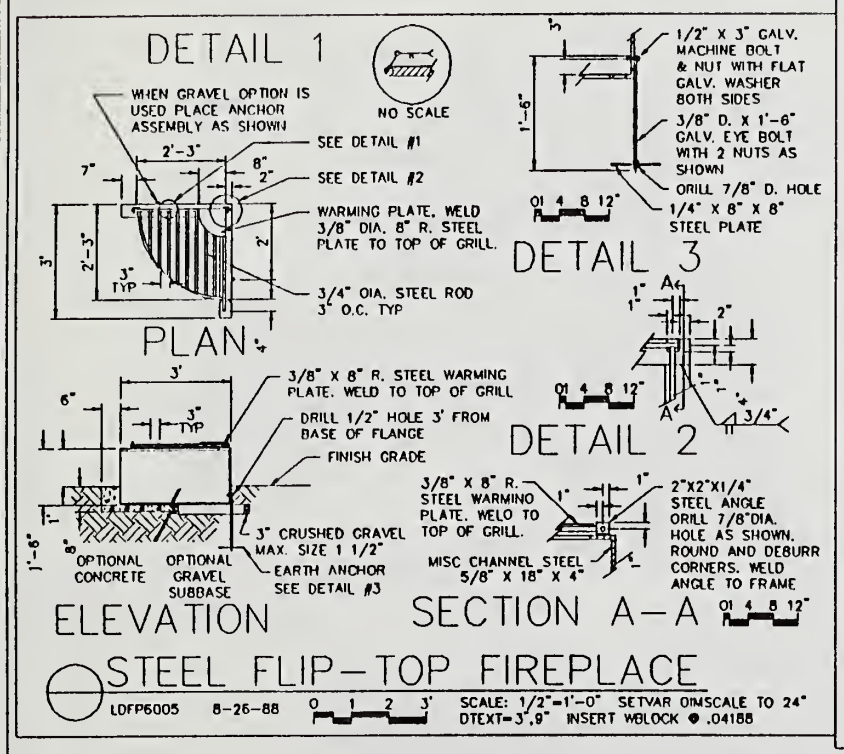
LDFP6006 8-27-88

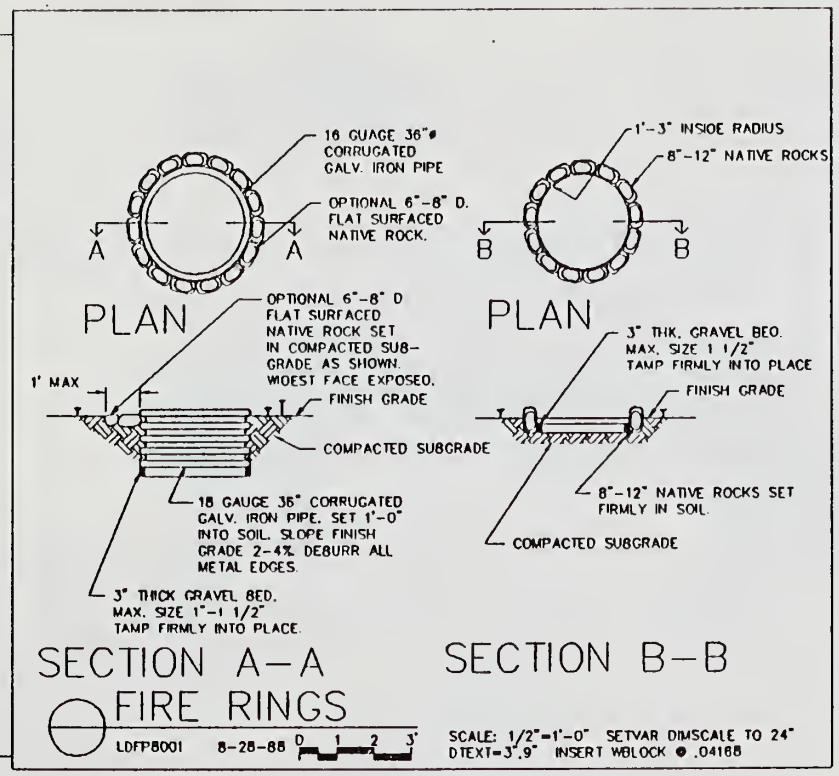


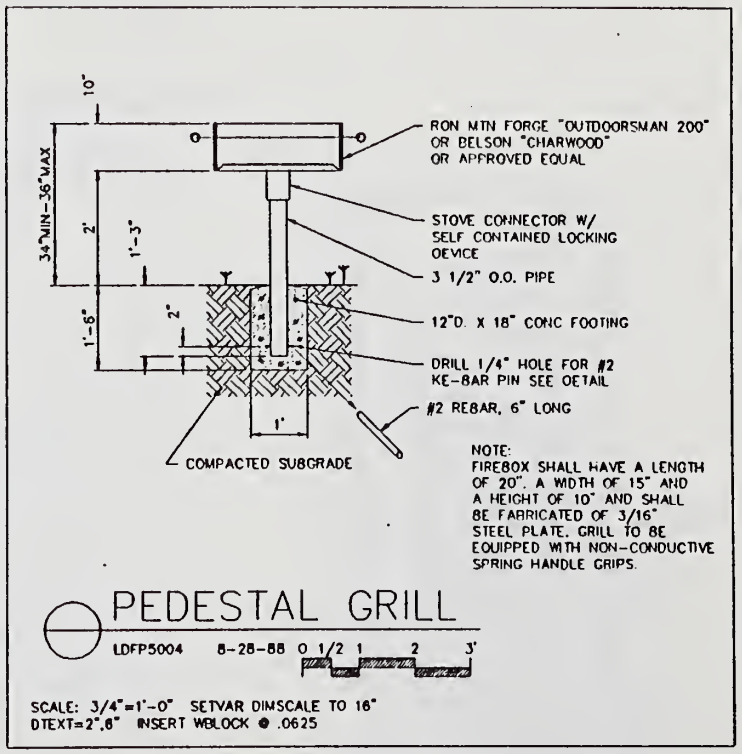
SCALE: 3/4"=1'-0" SETVAR DIMSCALE TO 16"
DTEXT=2",6" INSERT WBLOCK @ .0625

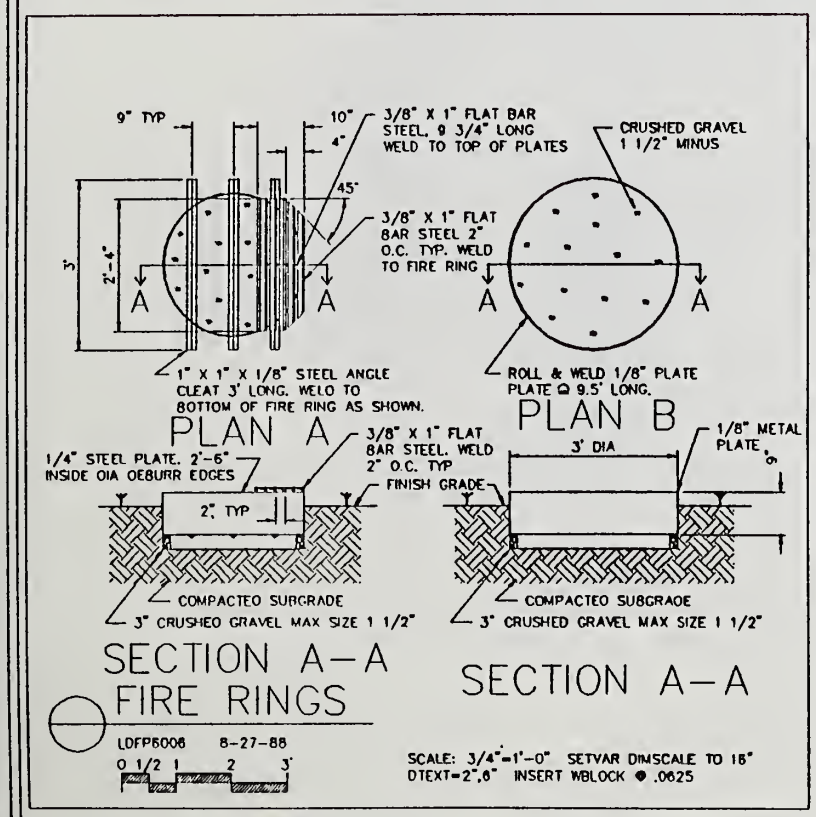
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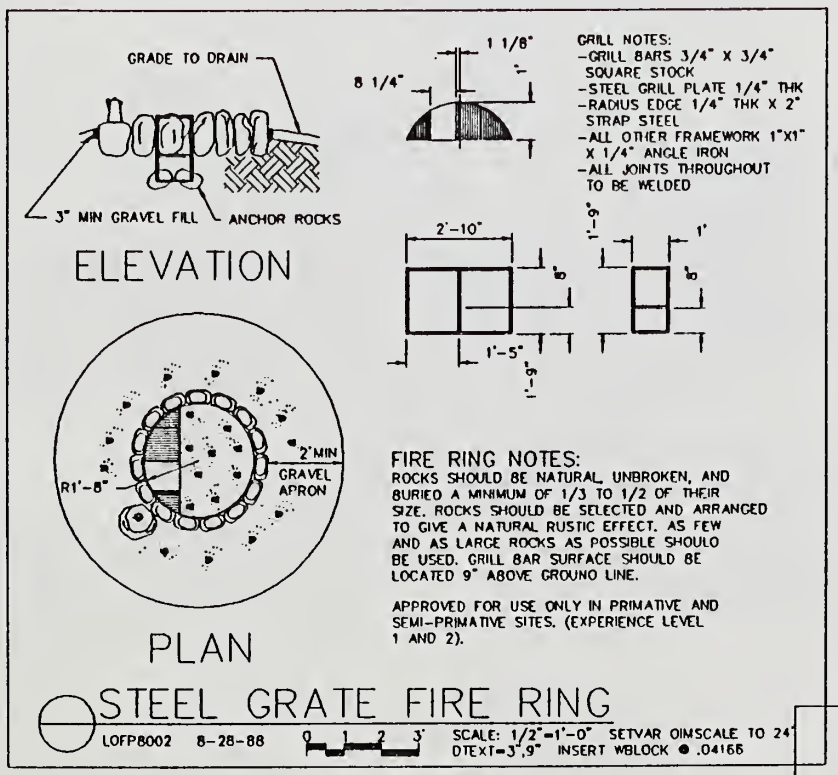
THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

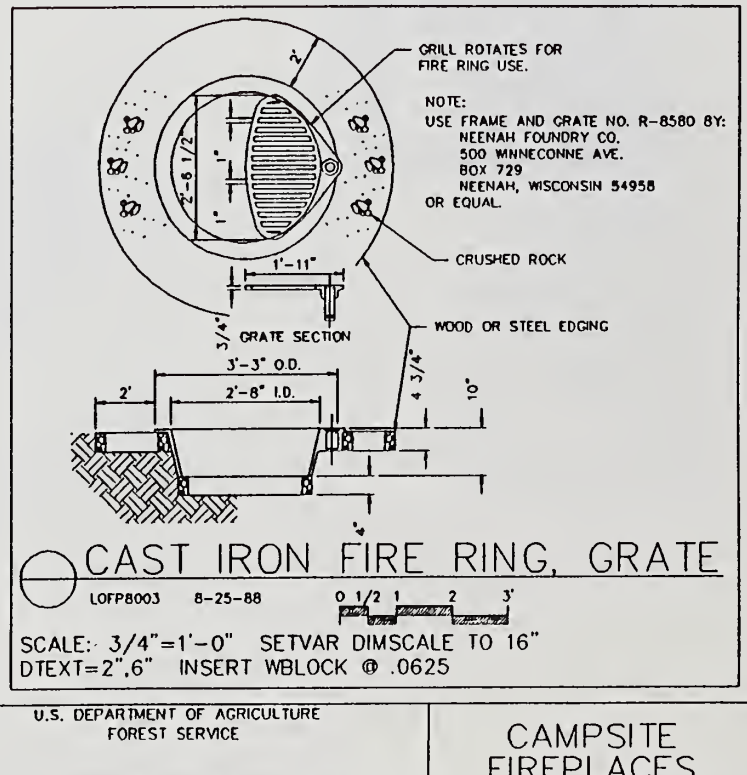












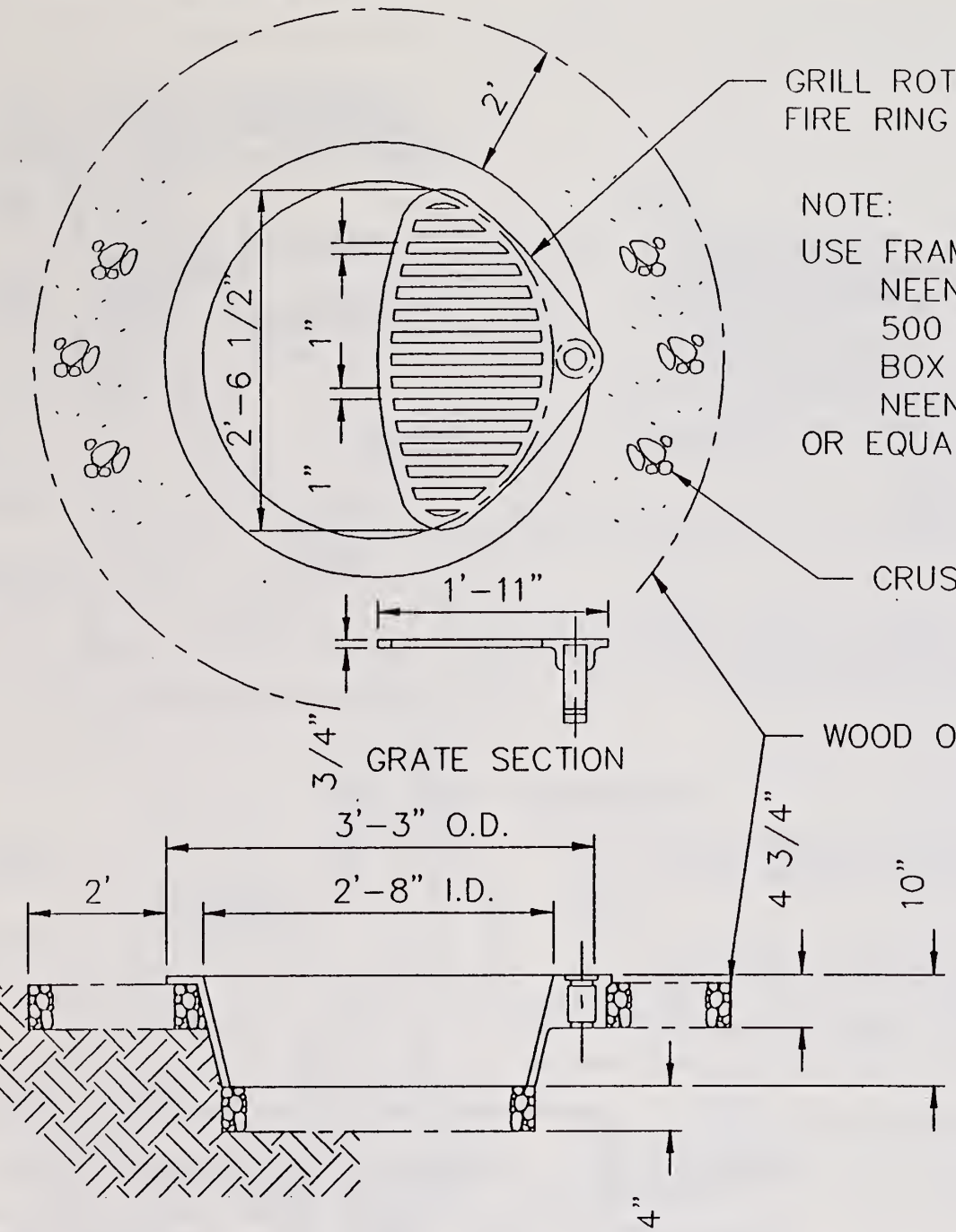
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

DRAWN	RLCARTER	DATE	8-29-88
DESIGNED		DATE	
CHECKED		DATE	
REVIEWED		DATE	

CAMPSITE FIREPLACES

REC[illegible]

SHT.
OF



GRILL ROTATES FOR
FIRE RING USE.

NOTE:
USE FRAME AND GRATE NO. R-8580 BY:
NEENAH FOUNDRY CO.
500 WINNECONNE AVE.
BOX 729
NEENAH, WISCONSIN 54956
OR EQUAL.

CRUSHED ROCK

WOOD OR STEEL EDGING

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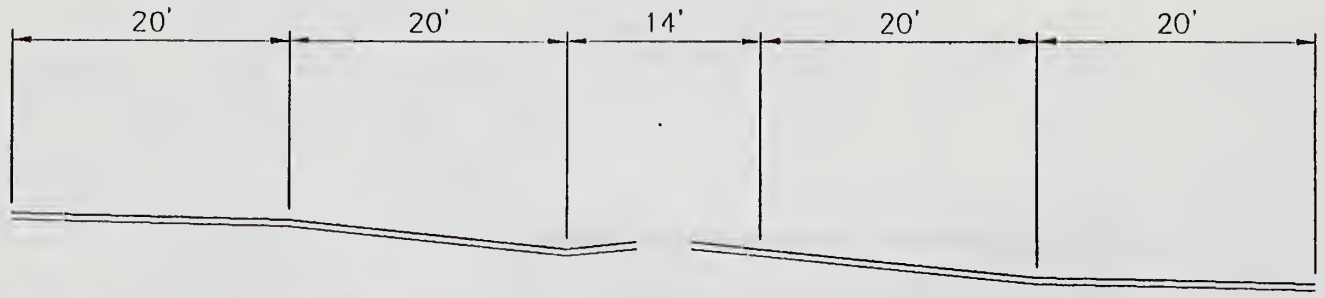
CAST IRON FIRE RING, GRATE

LDFP8003 8-25-88

0 1/2 1 2 3'

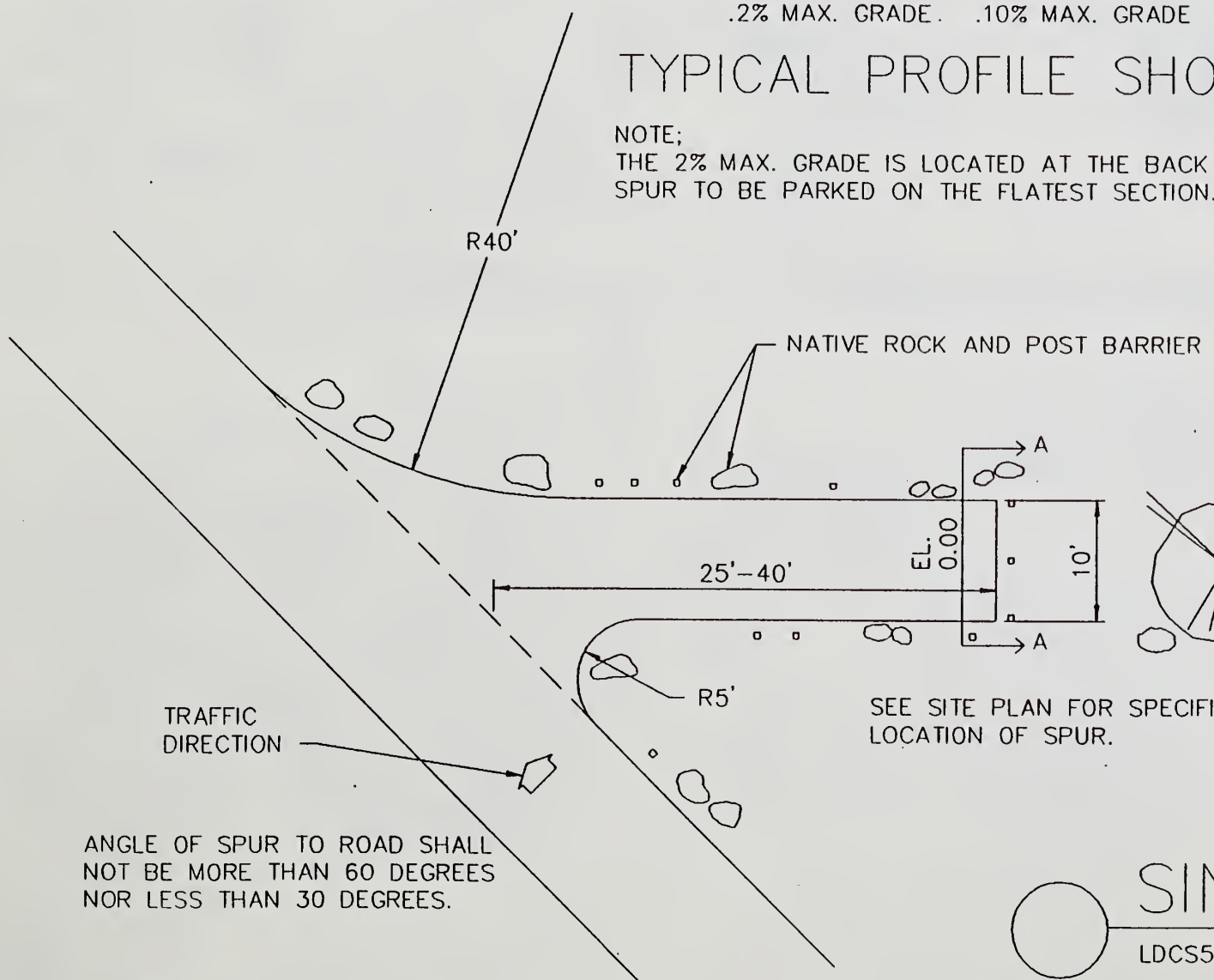
SCALE: 3/4"=1'-0" SETVAR DIMSCALE TO 16"
DTEXT=2",6" INSERT WBLOCK @ .0625

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.



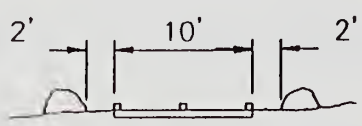
TYPICAL PROFILE SHOWING SPUR IN CUT OR FILL

NOTE;
THE 2% MAX. GRADE IS LOCATED AT THE BACK END OF THE SPUR SO THAT TRAILERS WILL BACK INTO THE SPUR TO BE PARKED ON THE FLATEST SECTION.



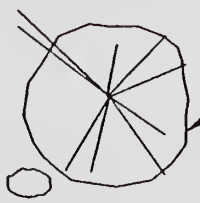
SEE SITE PLAN FOR SPECIFIC LOCATION OF SPUR.

PLAN



NOTE: SPUR IS LEVEL FROM SIDE TO SIDE.

SECTION A-A



RETAIN ALL TREES UNLESS OTHERWISE DIRECTED.

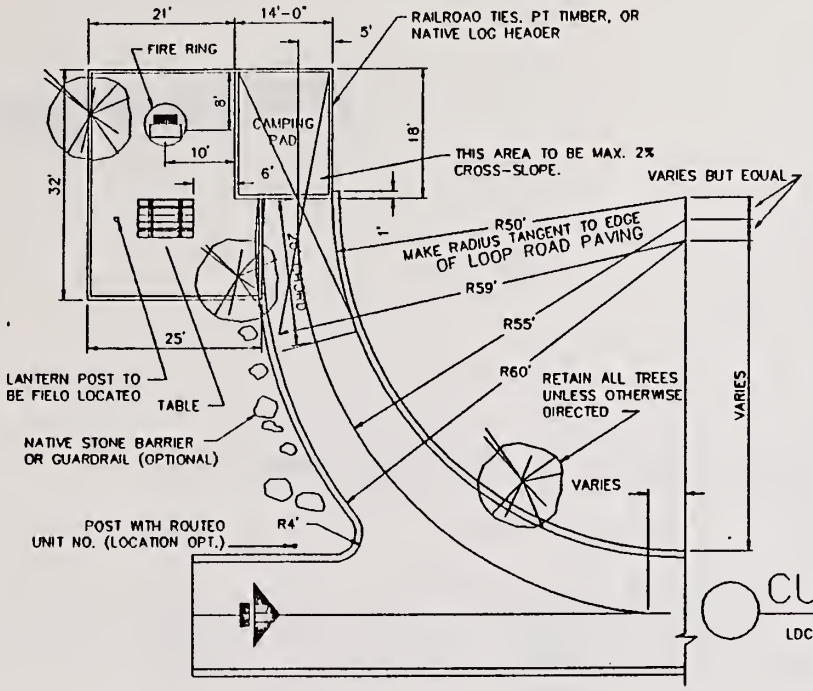
SINGLE CAMP SPUR

LDCS5005 8-18-88

0 4' 8' 12'

SCALE: 3/32"=1'-0" SETVAR DIMSCALE TO 128"
XT=16",48" INSERT WBLOCK @ .00781

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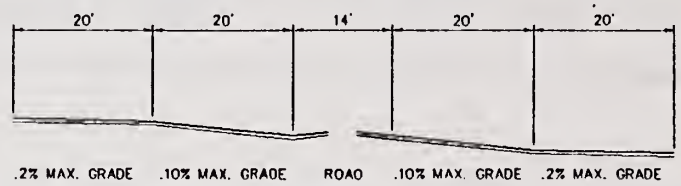
CURVED CAMP SPUR

LDCS8003 8-20-88

NOTE:
SHADED AREA TO BE REINFORCED WITH MATERIAL SELECTED BY LANDSCAPE ARCHITECT.

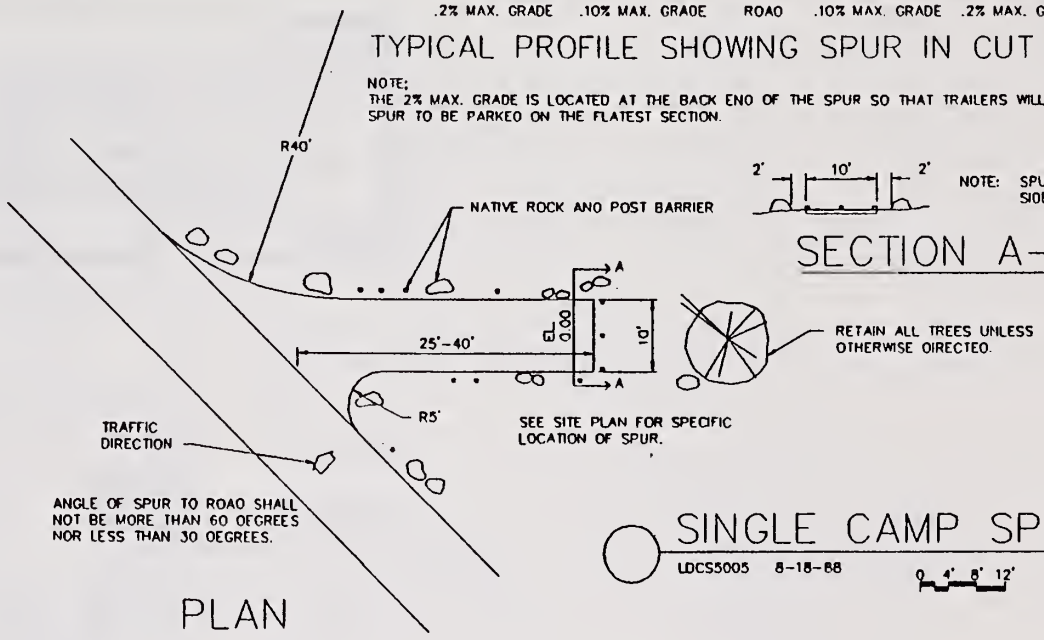
REINFORCED PAD TO BE DESIGNED TO ACCOMODATE SPECIFIC SITE CONDITIONS.

CENTRAL GARBAGE COLLECTION MAY BE APPROPRIATE DEPENDING UPON SITE DESIGN AND ADMINISTRATION.



TYPICAL PROFILE SHOWING SPUR IN CUT OR FILL

NOTE:
THE 2% MAX. GRADE IS LOCATED AT THE BACK END OF THE SPUR SO THAT TRAILERS WILL BACK INTO THE SPUR TO BE PARKED ON THE FLATEST SECTION.



PLAN

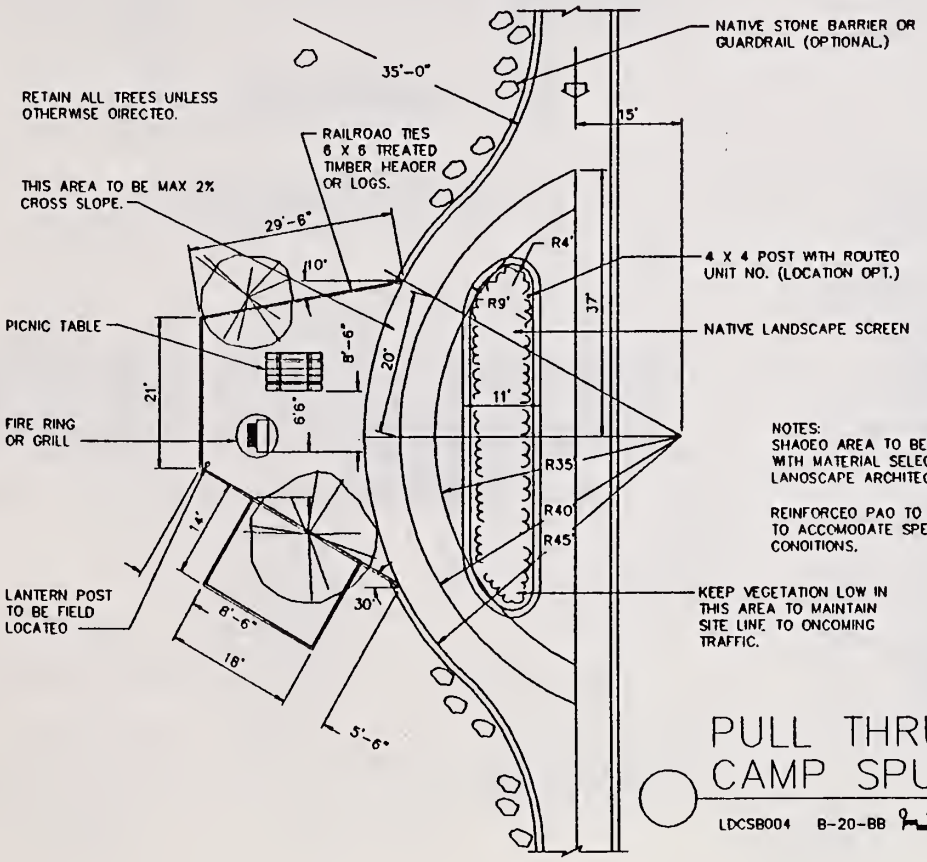
NOTE: SPUR IS LEVEL FROM SIDE TO SIDE.

SECTION A–A

SINGLE CAMP SPUR

LDCS5005 8-18-88

0 4' 8' 12'

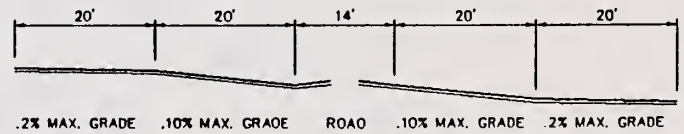


PULL THRU CAMP SPUR

LDCS8004 8-20-88 0 4' 8' 12'

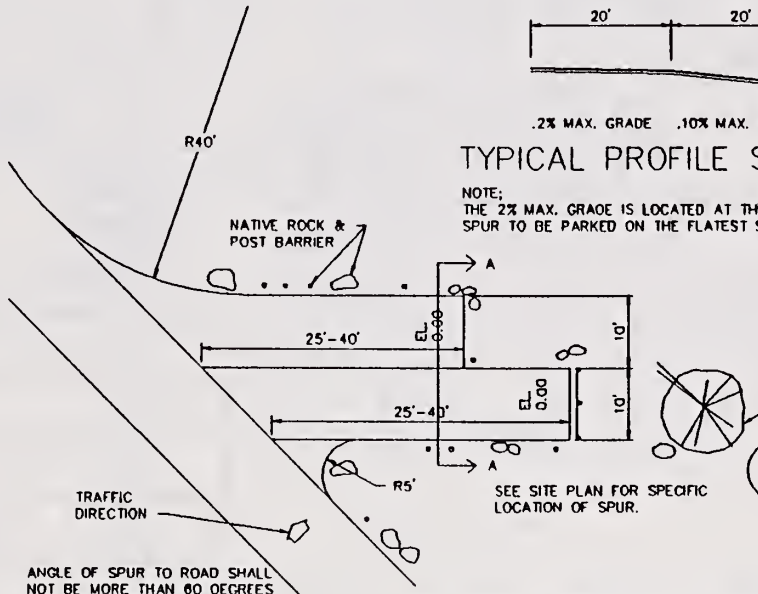
NOTES:
SHADED AREA TO BE REINFORCED WITH MATERIAL SELECTED BY THE LANDSCAPE ARCHITECT.

REINFORCED PAD TO BE DESIGNED TO ACCOMODATE SPECIFIC SITE CONDITIONS.

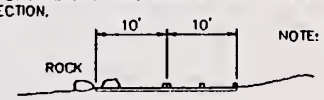


TYPICAL PROFILE SHOWING SPUR IN CUT OR FILL

NOTE:
THE 2% MAX. GRADE IS LOCATED AT THE BACK END OF THE SPUR SO THAT TRAILERS WILL BACK INTO THE SPUR TO BE PARKED ON THE FLATEST SECTION.



PLAN



NOTE: SPUR IS LEVEL FROM SIDE TO SIDE.

SECTION A–A

RETAIN ALL TREES UNLESS OTHERWISE DIRECTED.

DOUBLE CAMP SPUR

LDCS5006 8-19-88 0 4' 8' 12'

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

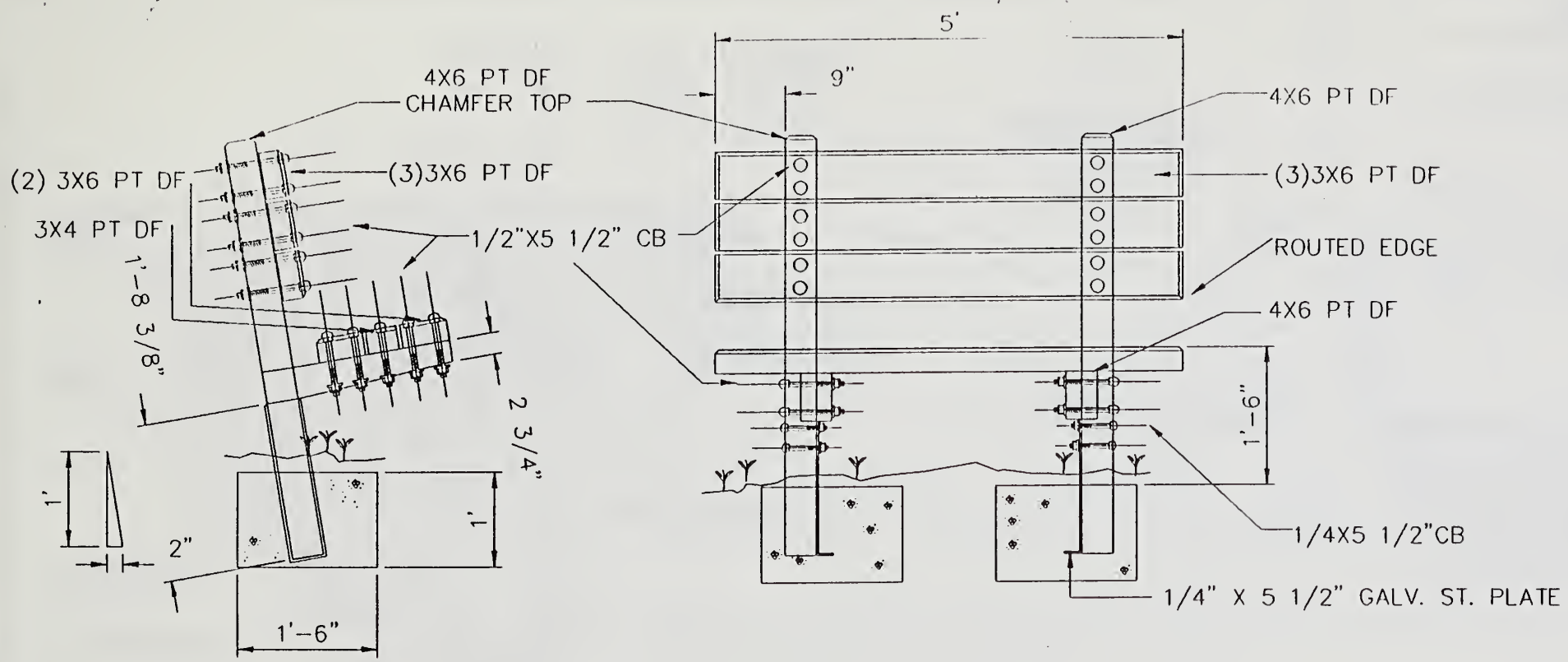
THE PACIFIC NORTHWEST REGION

DRAWN RLCARTER DATE 8-20-88
DESIGNED DATE
CHECKED DATE

CAMP SPURS
8-20-88

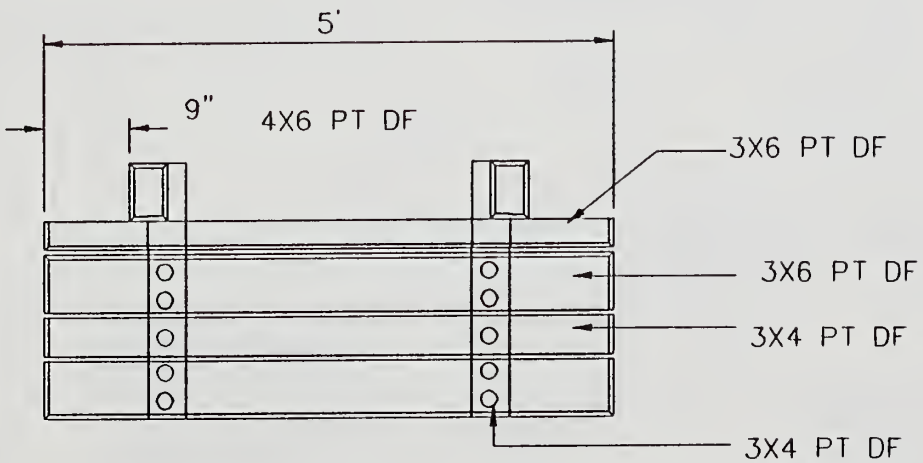
REC00009

SHT
OF



SIDE ELEVATION

FRONT ELEVATION



PLAN VIEW



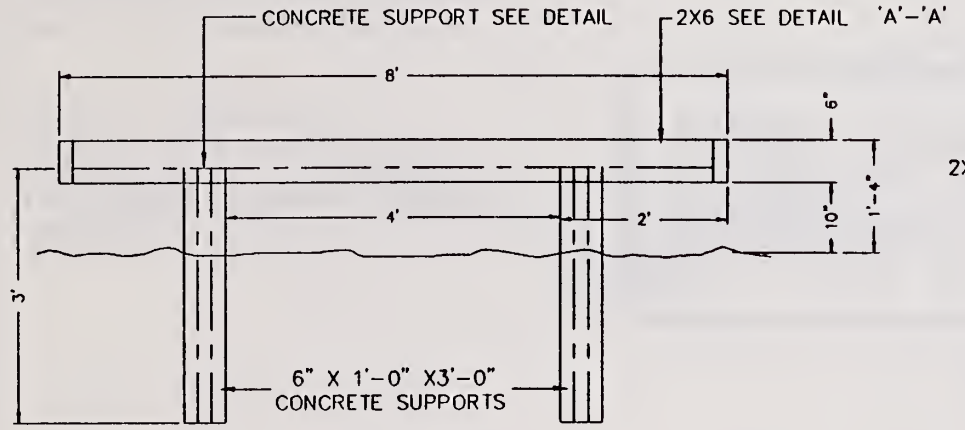
WOOD BENCH WITH BACKREST

LDBE8002

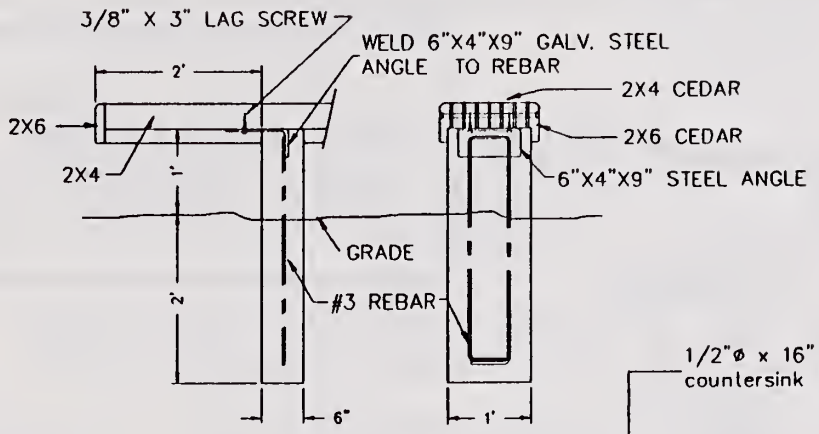
AUGUST 18, 1988

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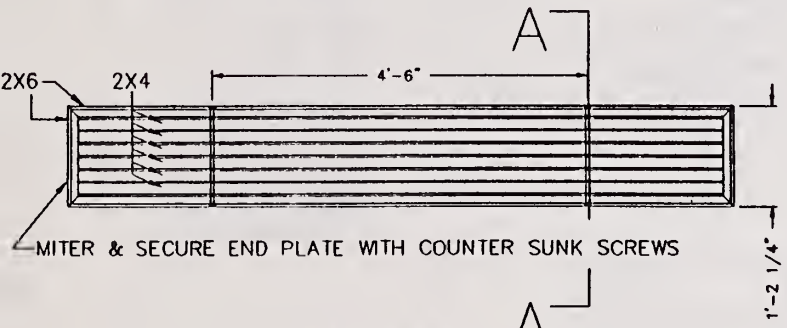
THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.



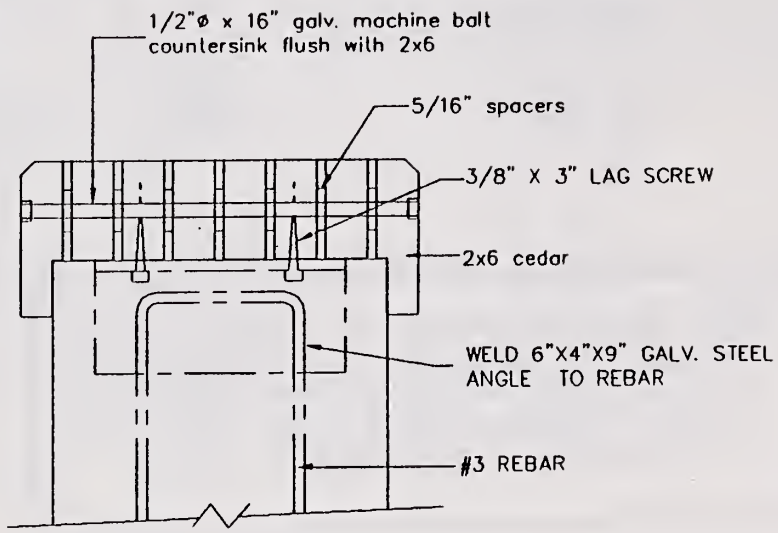
ELEVATION



SECTION



PLAN



SECTION 'A'–'A'

0 1/2 1 2 3'

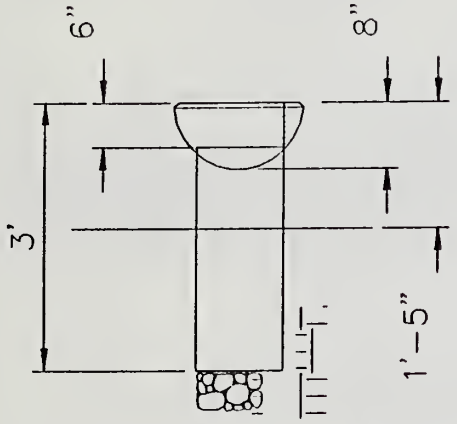
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0 1/2 1 2 3'

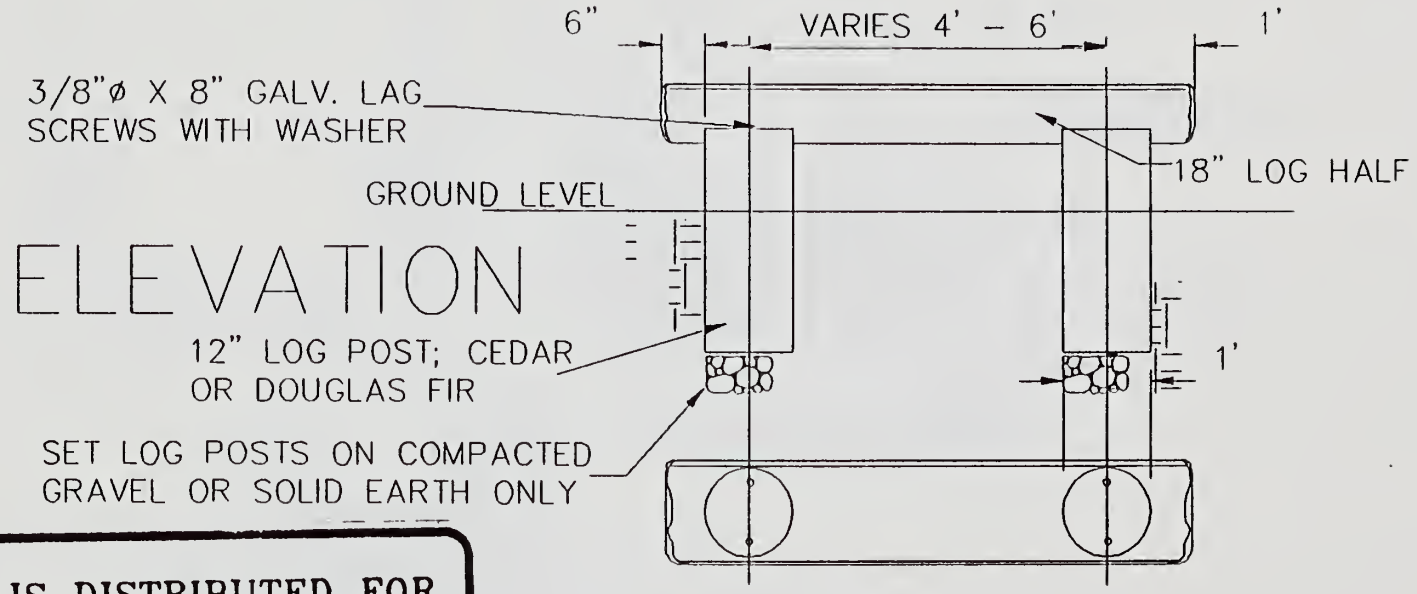
WOOD BENCH CONCRETE SUPPORTS

LDBE8001 AUGUST 22,1988

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SECTION

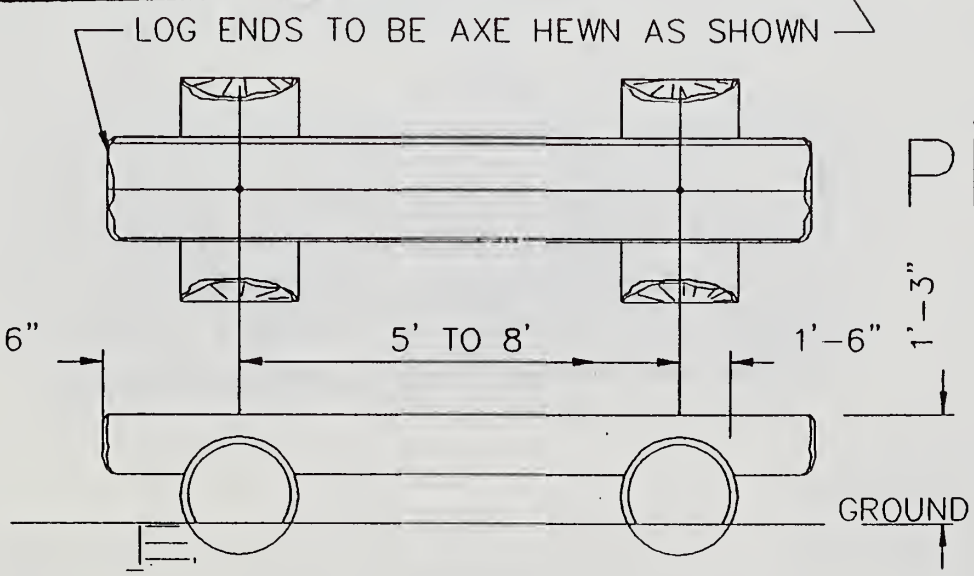


ELEVATION

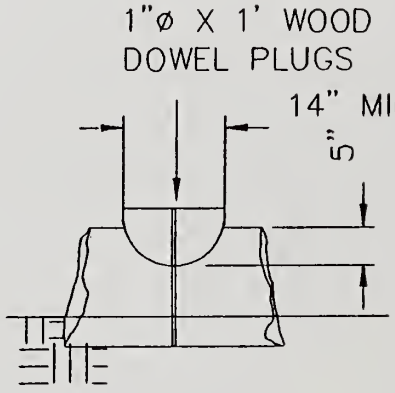
PLAN

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

NOTES:
USE CROSS-GRAIN DOWEL PLUGS WITH WATERPROOF EPOXY RESIN GLUE



PLAN



SECTION

NOTES:
USE ONE COAT OF CLEAR FPL ON SEAT
USE PENTA TREATED DF OR CEDAR LOGS FOR PORTIONS COMMING IN CONTACT WITH GROUND

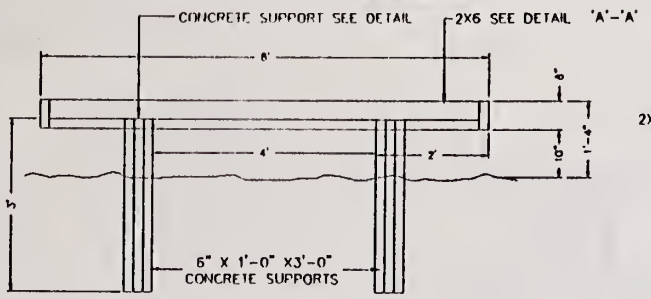
LOG BENCHES

LDBE AUGUST 22,1988

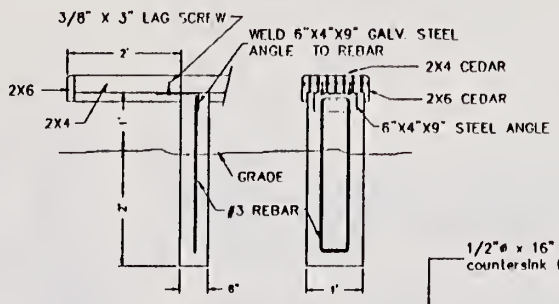
ELEVATION

0 1 2 3'

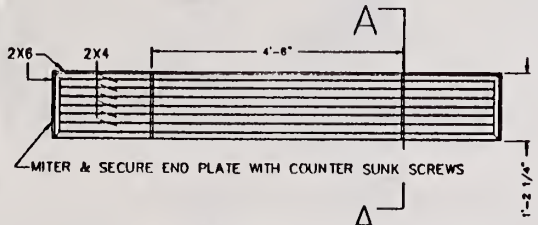
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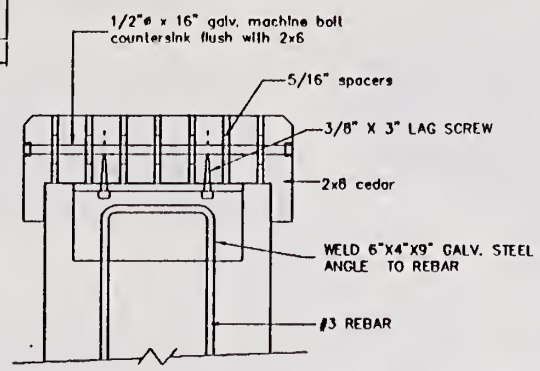
ELEVATION

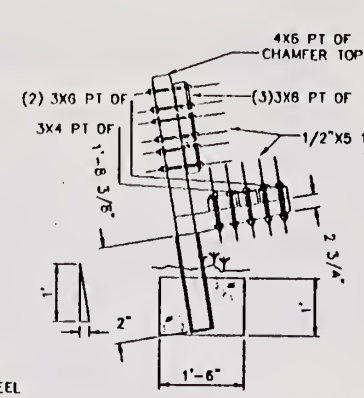


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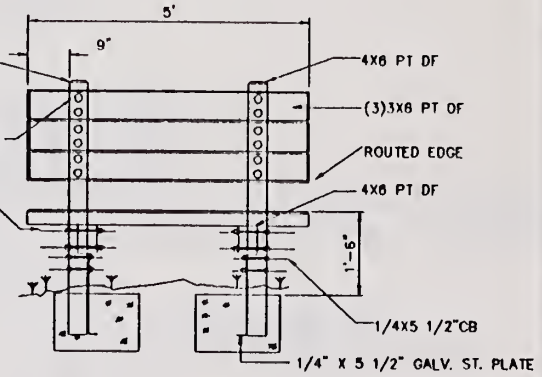


PLAN





SIDE ELEVATION



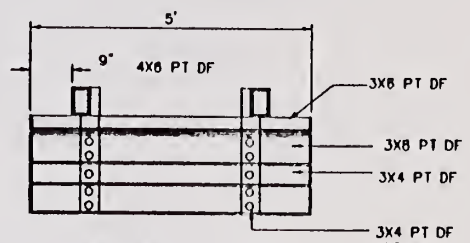
FRONT ELEVATION

SECTION 'A'-'A'



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TEXT= 1", 3"
INSERT ● .125





PLAN VIEW

WOOD BENCH CONCRETE SUPPORTS

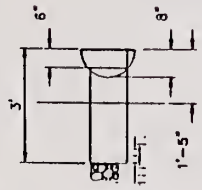
LDBE8001 AUGUST 22,1988

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WOOD BENCH WITH BACKREST

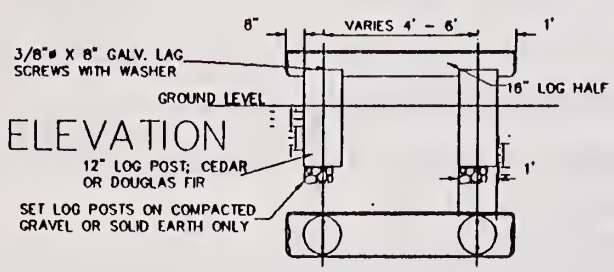
LDBE8002

AUGUST 16, 1988

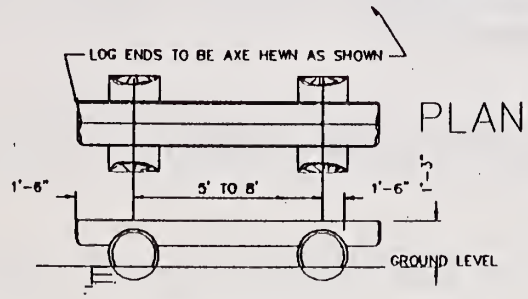


SECTION

NOTES:
USE CROSS-GRAIN DOWEL PLUGS WITH WATERPROOF EPOXY RESIN GLUE

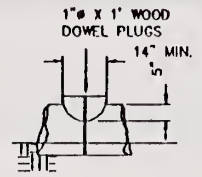


PLAN



PLAN

ELEVATION



SECTION

NOTES:
USE ONE COAT OF CLEAR FPL ON SEAT
USE PENTA TREATED DF OR CEDAR LOGS FOR PORTIONS COMMING IN CONTACT WITH GROUND

LOG BENCHES

LDBE8003 AUGUST 22,1988



SCALE=1/2"=1'-0"
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TEXT= 3", 9"
INSERT ● .04166

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U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

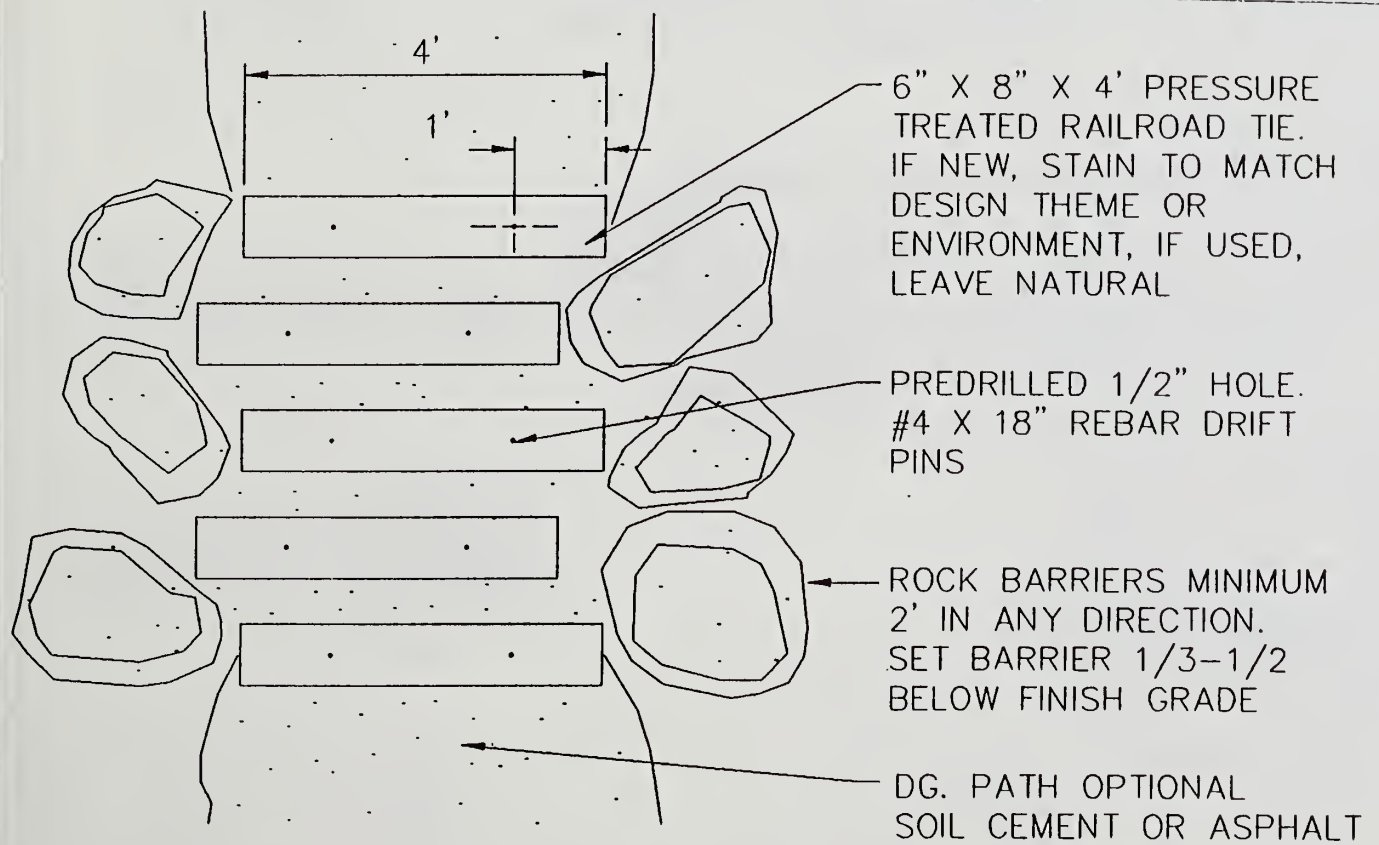
DRAWN DATE 8-22-88
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

BENCH DETAILS

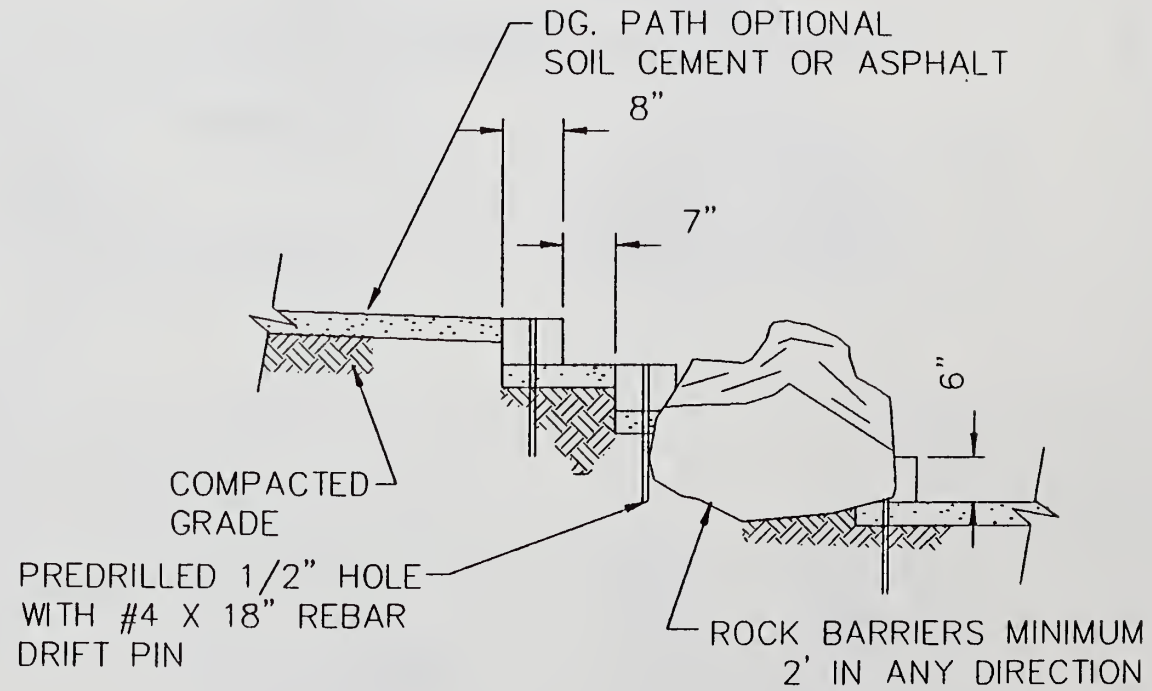
REC00008

SHT.
OF

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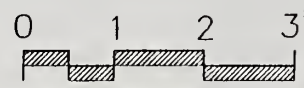


PLAN

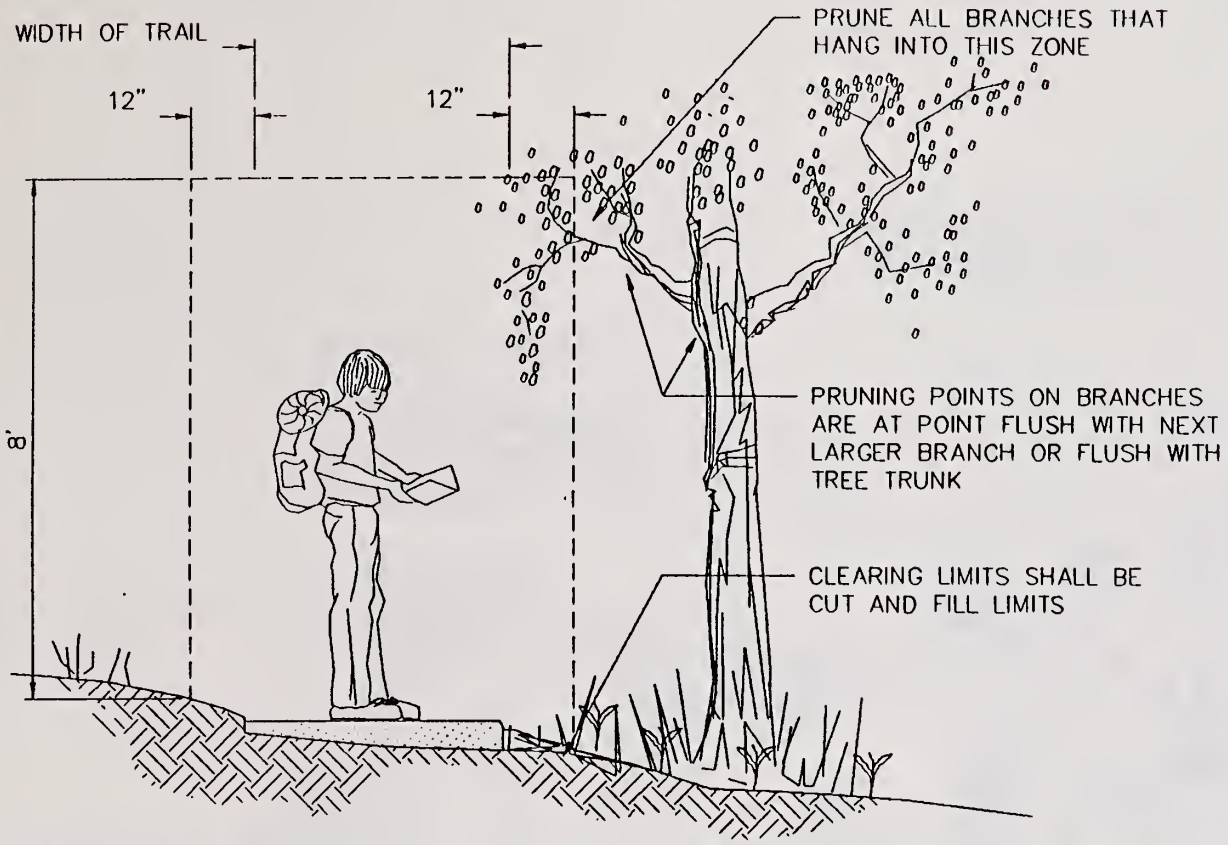


SECTION

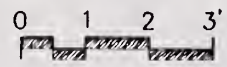
RR TIE STEPS W/PAVED TREADS



LDS [illegible]3 8-10-88



TRAIL CLEARING LIMITS
TYPICAL SECTION



NOTES:

- THESE ARE SPECIAL PURPOSE TRAILS INTENDED FOR USE IN AND AROUND DEVELOPED RECREATION SITES.
- DRAINAGE STRUCTURES, WHEN NECESSARY, SUCH AS WATERBARS AND DIPS SHALL BE AS CALLED FOR ON THE DRAWINGS OR AS STAKED IN THE FIELD
- REFER TO TRAILS HANDBOOK (FSH 7709.12) FOR DETAIL INFORMATION ON ALL-PURPOSE TRAILS.

TREATED EDGER

- TREAT EDGER WITH 3 COAT 5% PENTACHLOROPHENOL WOOD PRESERVATIVE OR AS SPECIFIED.
- SUBSTITUTE 14" X 4" TEMPERED HARDBOARD FOR EDGER ON CURVES AS NECESSARY.
- FASTEN STAKES TO EDGER WITH (2) EACH 4D COMMON NAILS. HOLD TOP OF STAKE 1" LOWER THAN TOP OF EDGER.

BITUMINOUS TRAILS

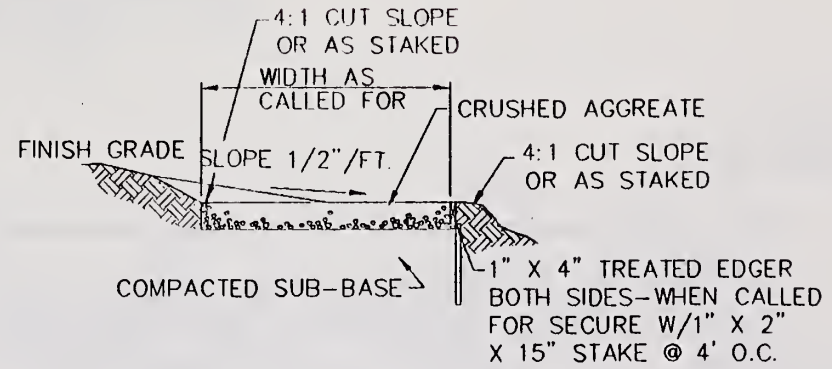
- USE BITUMINOUS PRIME COAT UNDERNEATH BITUMINOUS SURFACING WHEN CALLED FOR ON DRAWING.
- USE BITUMINOUS SEAL COAT ON TOP OF BITUMINOUS SURFACING WHEN CALLED FOR ON DRAWING.

CONCRETE TRAILS

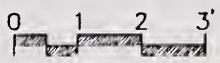
- PLACE 1/2" EXPANSION JOINT FILLER @ 20'-0 O.C. IN CONCRETE TRAIL.
- CONSTRUCT 1" DEEP SCORE JOINT @ 5'-0 O.C. IN BETWEEN EXPANSION JOINTS.

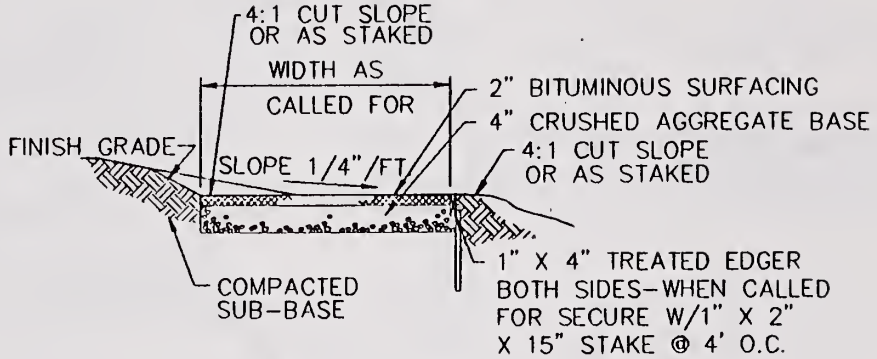
WALK AND TRAIL DETAILS

LDTR4001 8-28-88

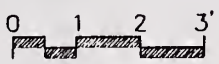


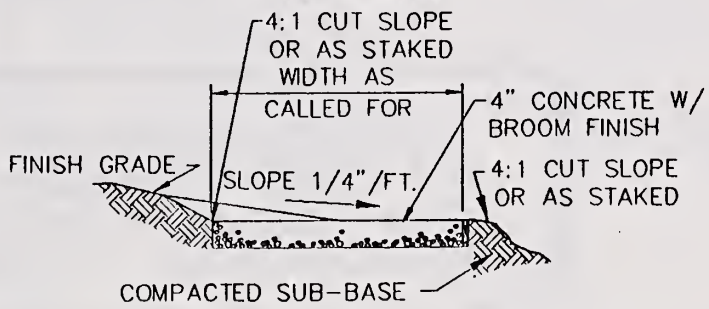
AGGREGATE TRAIL
TYPICAL SECTION





BITUMINOUS SURFACED TRAIL
TYPICAL SECTION



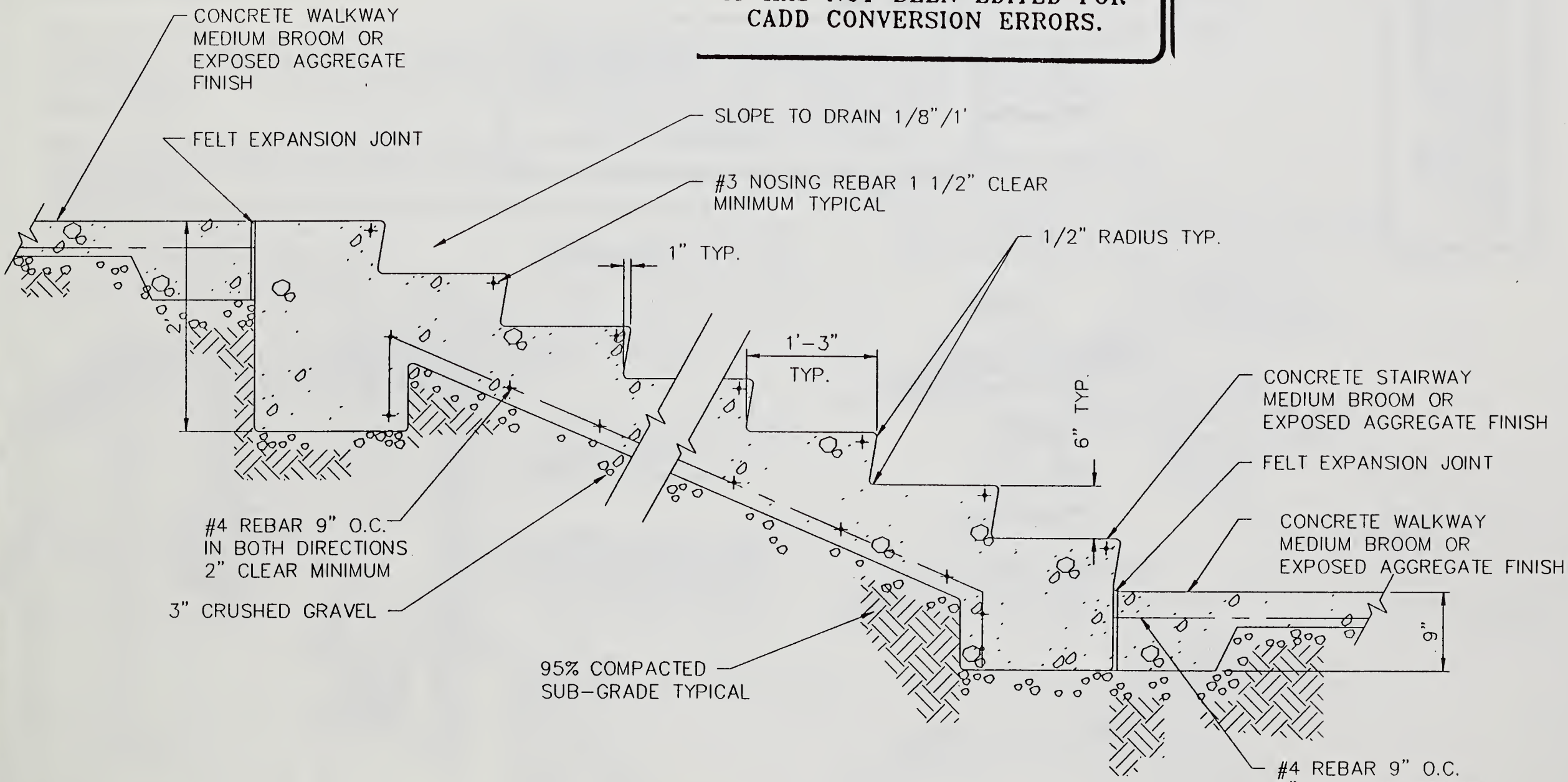


CONCRETE TRAIL
TYPICAL SECTION



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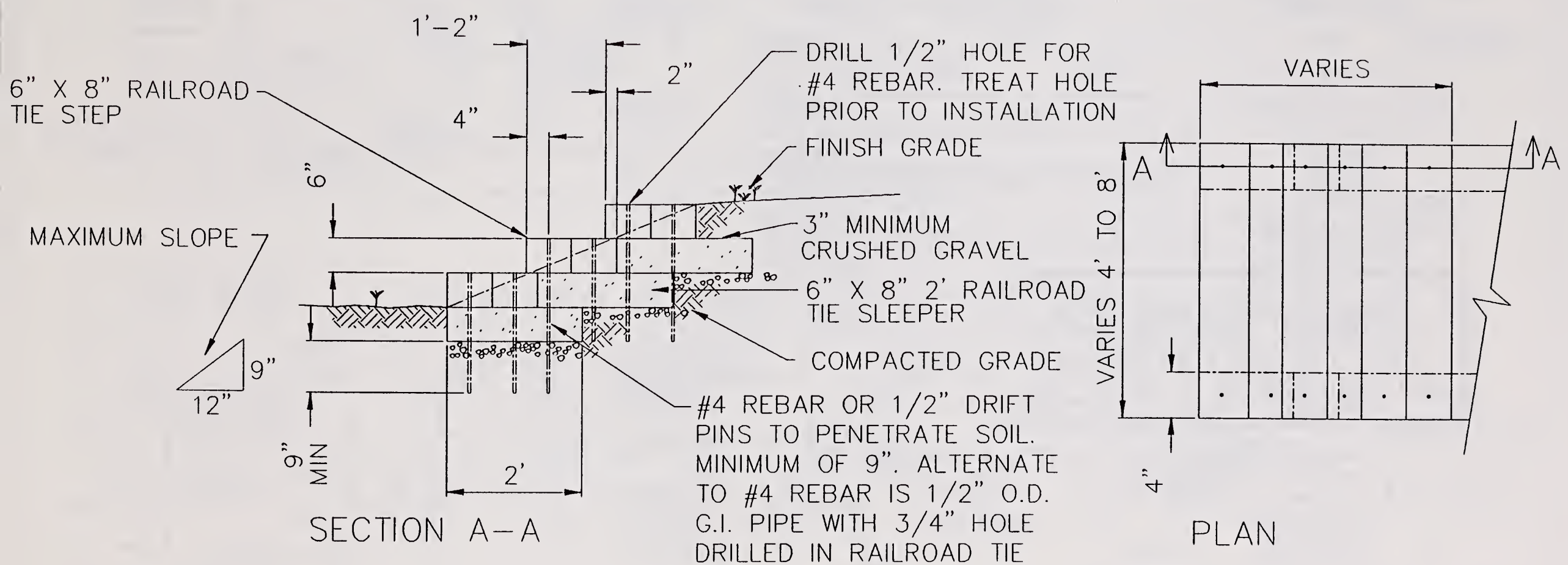


CONCRETE STEPS

LDST6004 8-2-88

1ft 6 3 0 1

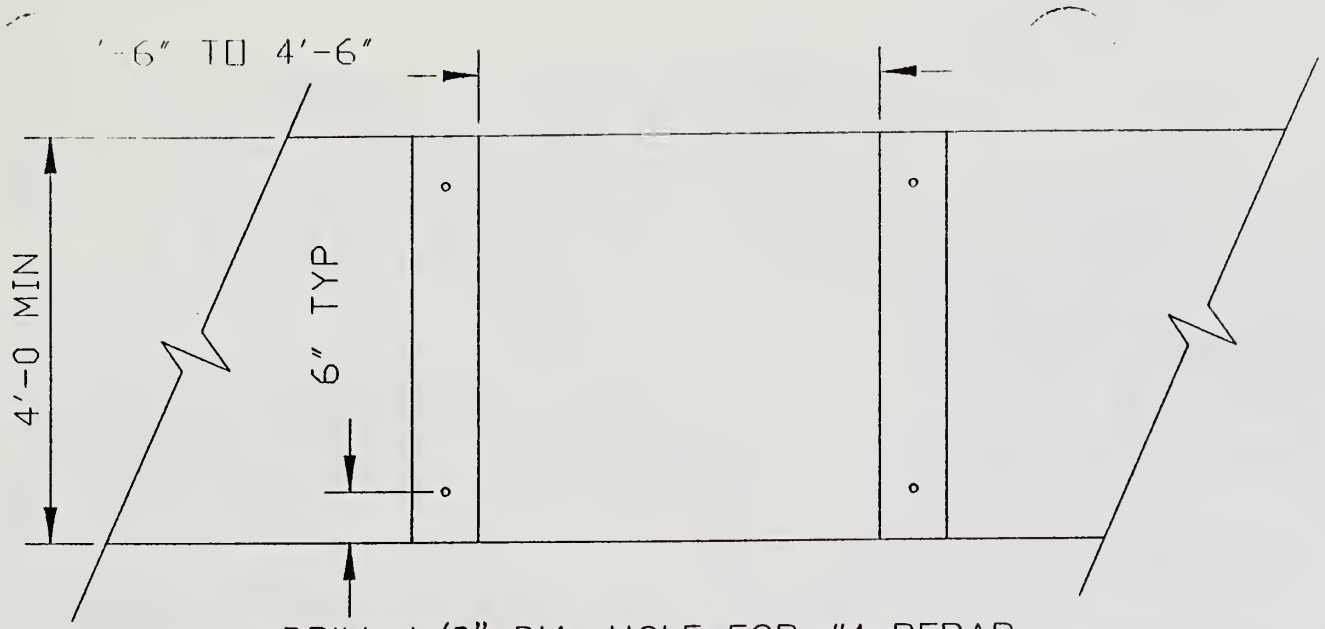
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DOUBLE RR TIE STEPS

LDST5002 8-10-88

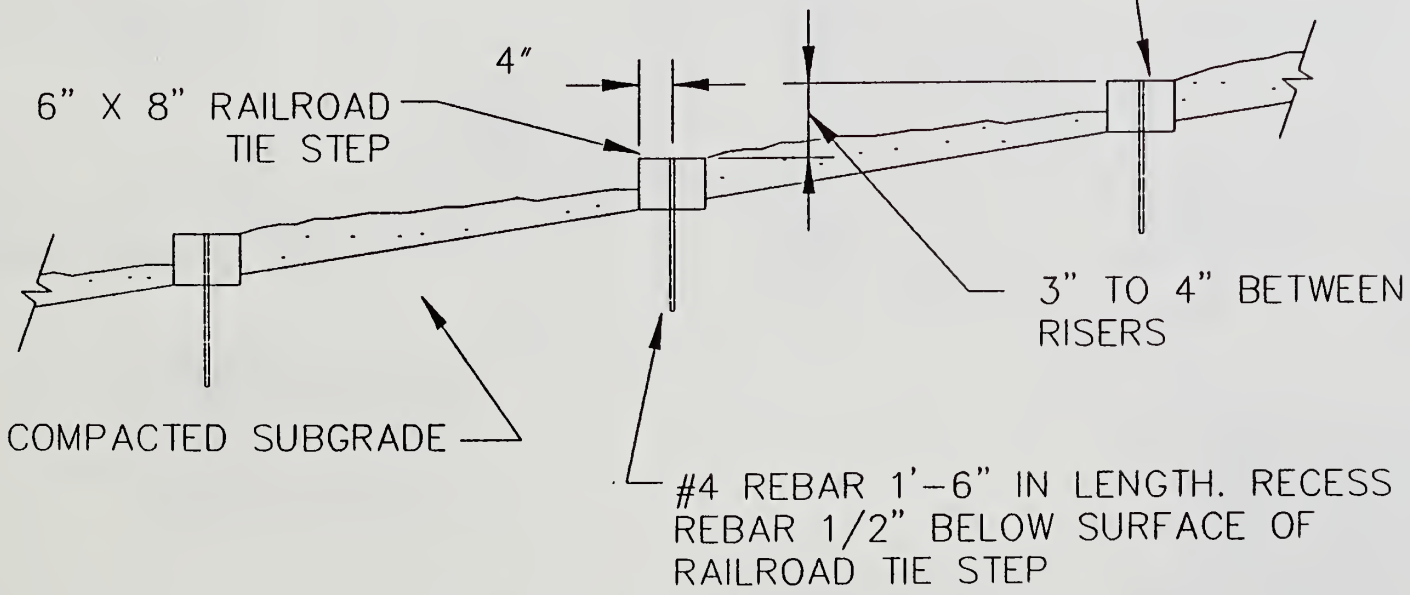
0 1 2 3'



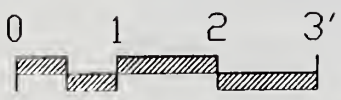
DRILL 1/2" DIA. HOLE FOR #4 REBAR. TREAT HOLE WITH PENTACHLOROPHENOL PRIOR TO INSTALLATION OF REBARS. PLUG HOLE WITH 1/2" DOWEL.

PLAN

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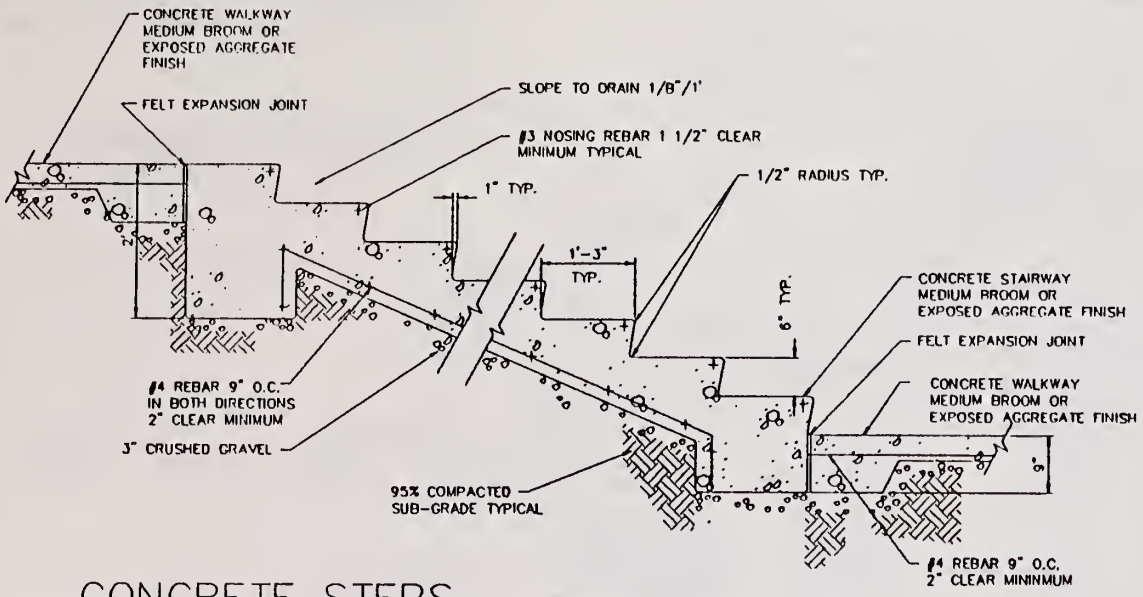
TYPICAL SECTION



R/R TIE STEP W/RAMP

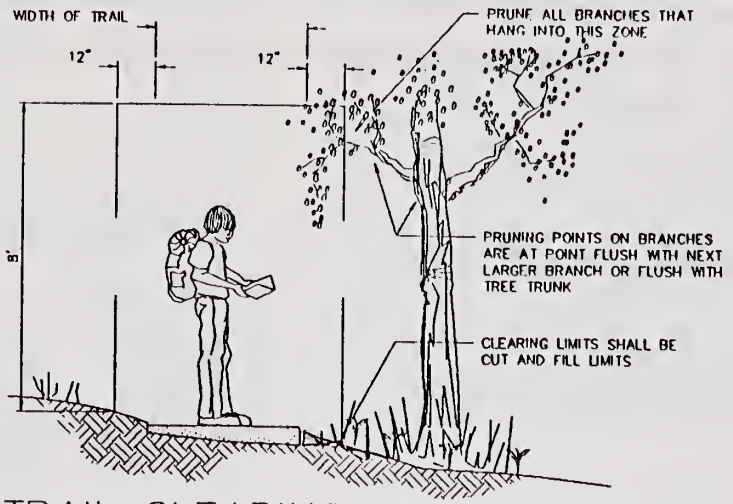
LDST0001 8-30-88

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CONCRETE STEPS

LDST6004 8-2-88



TRAIL CLEARING LIMITS

TYPICAL SECTION

NOTES:

- THESE ARE SPECIAL PURPOSE TRAILS INTENDED FOR USE IN AND ARDUND DEVELOPED RECREATION SITES.
- DRAINAGE STRUCTURES, WHEN NECESSARY, SUCH AS WATERBARS AND DIPS SHALL BE AS CALLED FOR ON THE DRAWINGS OR AS STAKED IN THE FIELD
- REFER TO TRAILS HANDBOOK (FSH 7709.12) FOR DETAIL INFORMATION ON ALL-PURPOSE TRAILS.

TREATED EDGER

- TREAT EDGER WITH 3 COAT 5% PENTACHLORDPHENOL WOOD PRESERVATIVE OR AS SPECIFIED.
- SUBSTITUTE 14" X 4" TEMPERED HARDBOARD FOR EDGER ON CURVES AS NECESSARY.
- FASTEN STAKES TO EDGER WITH (2) EACH 4D COMMON NAILS. HOLD TOP OF STAKE 1" LOWER THAN TOP OF EDGER.

BITUMINOUS TRAILS

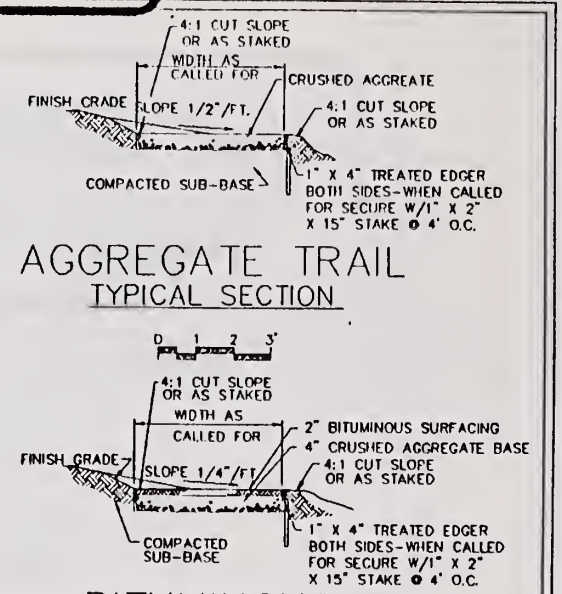
- USE BITUMINOUS PRIME COAT UNDERNEATH BITUMINOUS SURFACING WHEN CALLED FOR ON DRAWING.
- USE BITUMINOUS SEAL COAT ON TOP OF BITUMINOUS SURFACING WHEN CALLED FOR ON DRAWING.

CONCRETE TRAILS

- PLACE 1/2" EXPANSION JOINT FILLER @ 20'-0 O.C. IN CONCRETE TRAIL.
- CONSTRUCT 1" DEEP SCORE JOINT @ 5'-0 O.C. IN BETWEEN EXPANSION JOINTS.

WALK AND TRAIL DETAILS

LDTR4001 8-28-88

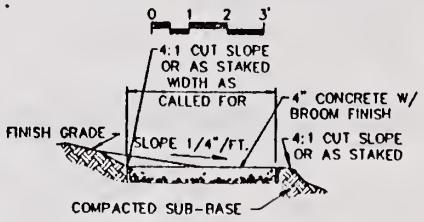


AGGREGATE TRAIL

TYPICAL SECTION

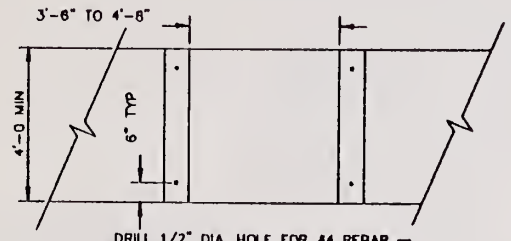
BITUMINOUS SURFACED TRAIL

TYPICAL SECTION



CONCRETE TRAIL

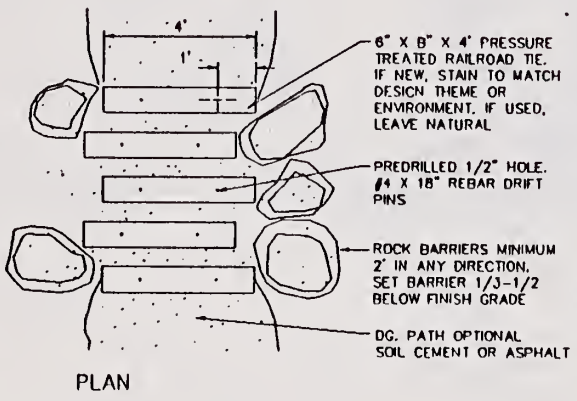
TYPICAL SECTION



TYPICAL SECTION

R/R TIE STEP W/RAMP

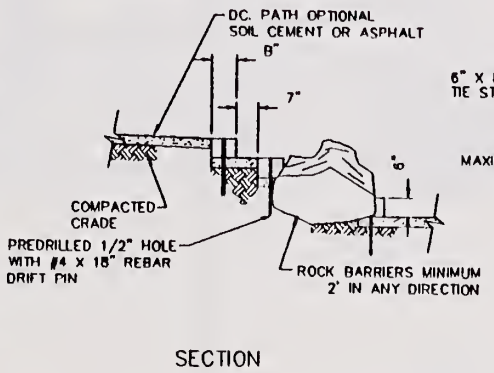
LDST6001 8-30-88



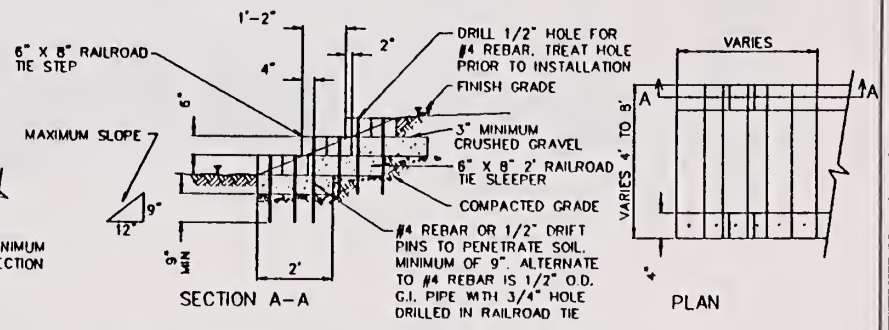
PLAN

RR TIE STEPS W/PAVED TREADS

LDST6003 8-10-88



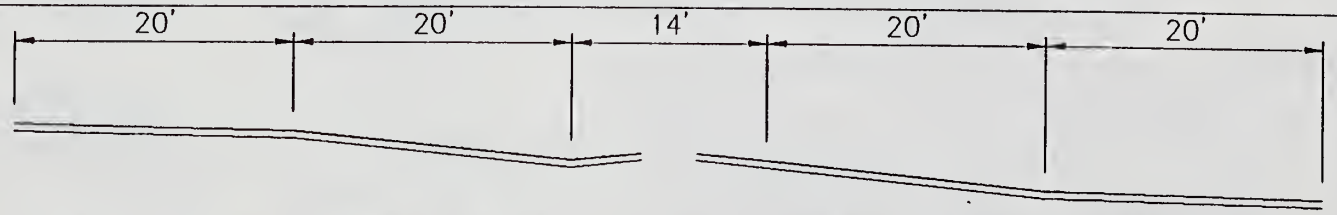
SECTION



DOUBLE RR TIE STEPS

LDST5002 8-10-88

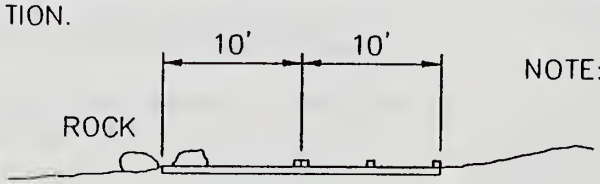
U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE THE PACIFIC NORTHWEST REGION DRAWN DATE DESIGNED DATE CHECKED DATE	PATHS AND STEPS REC00006 SHT.



.2% MAX. GRADE .10% MAX. GRADE ROAD .10% MAX. GRADE .2% MAX. GRADE

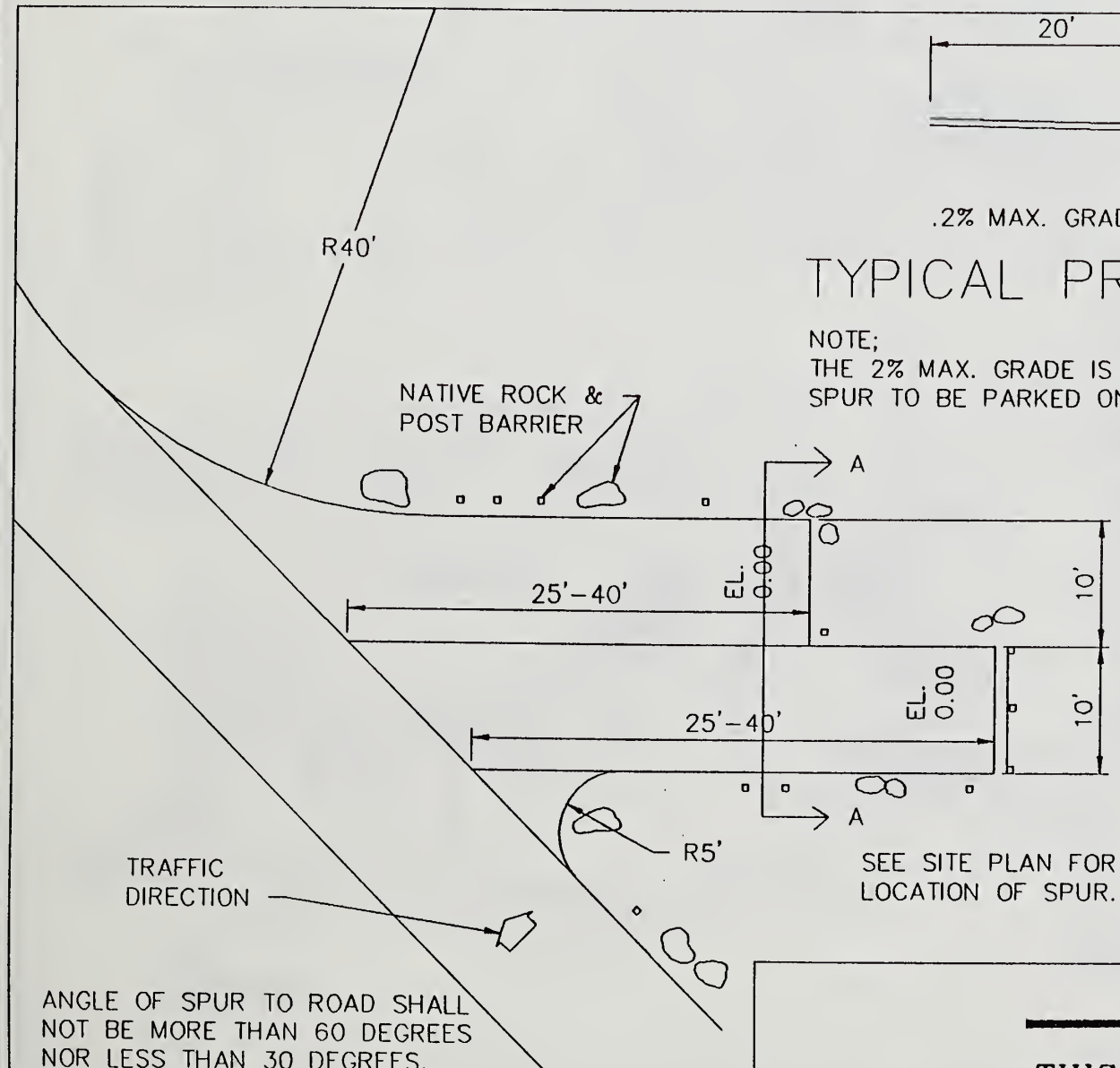
TYPICAL PROFILE SHOWING SPUR IN CUT OR FILL

NOTE;
THE 2% MAX. GRADE IS LOCATED AT THE BACK END OF THE SPUR SO THAT TRAILERS WILL BACK INTO THE SPUR TO BE PARKED ON THE FLATEST SECTION.

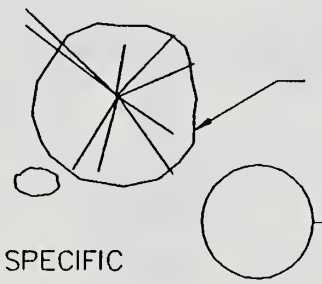


NOTE: SPUR IS LEVEL FROM SIDE TO SIDE.

SECTION A–A



SEE SITE PLAN FOR SPECIFIC LOCATION OF SPUR.



RETAIN ALL TREES UNLESS OTHERWISE DIRECTED.

DOUBLE CAMP SPUR

LDCS5006 8–19–88 0 4' 8' 12'

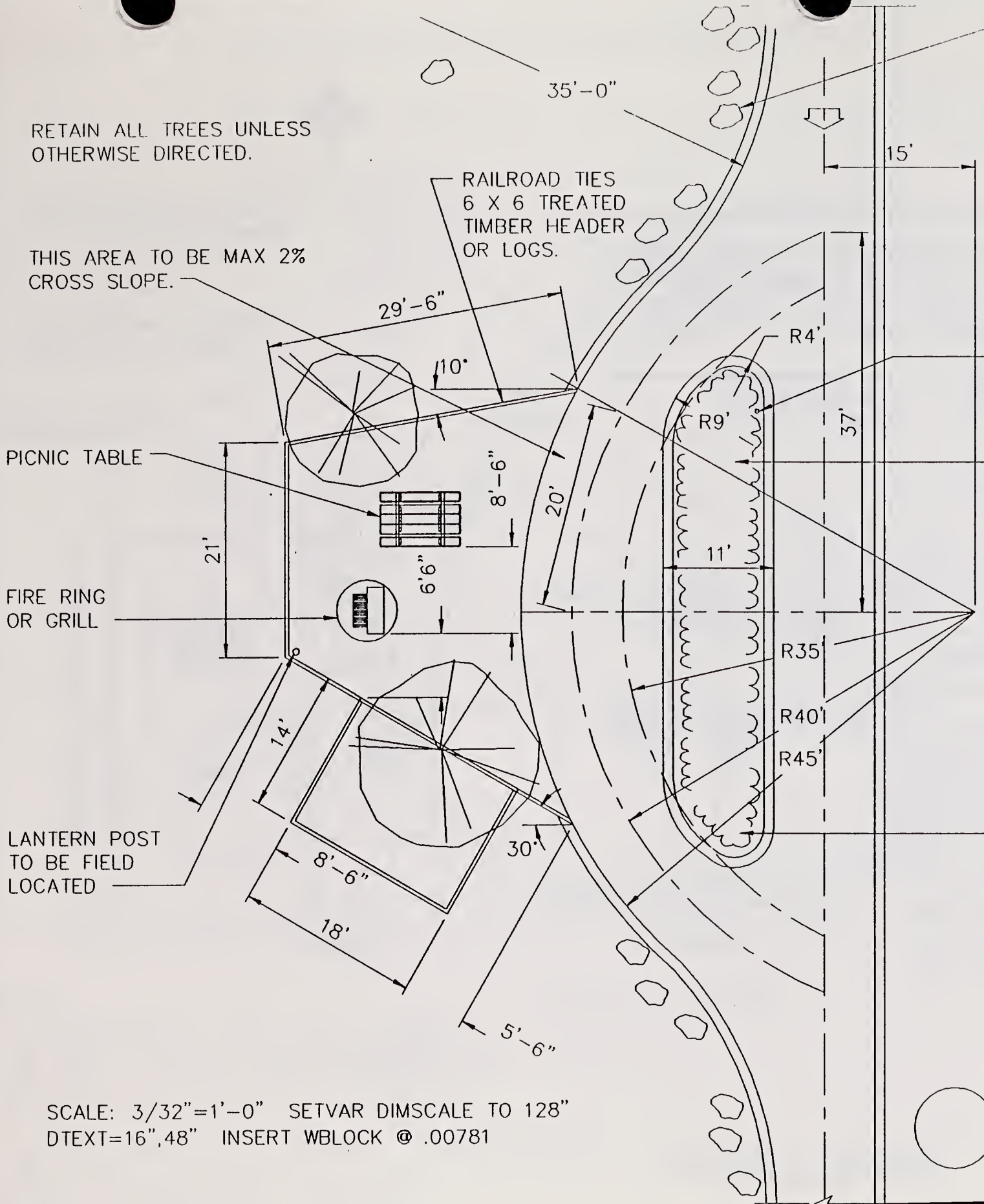
ANGLE OF SPUR TO ROAD SHALL NOT BE MORE THAN 60 DEGREES NOR LESS THAN 30 DEGREES.

PLAN

SCALE. 3/32" = 1'-0" SETVAR DIMSCALE TO 128"
DTEXT=16",4 INSERT WBLOCK @ .00781

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

SCALE 3/32"=1'-0" SETVAR DIMSCALE TO 128"
DTEXT=16",48" INSERT WBLOCK @ .00781



THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

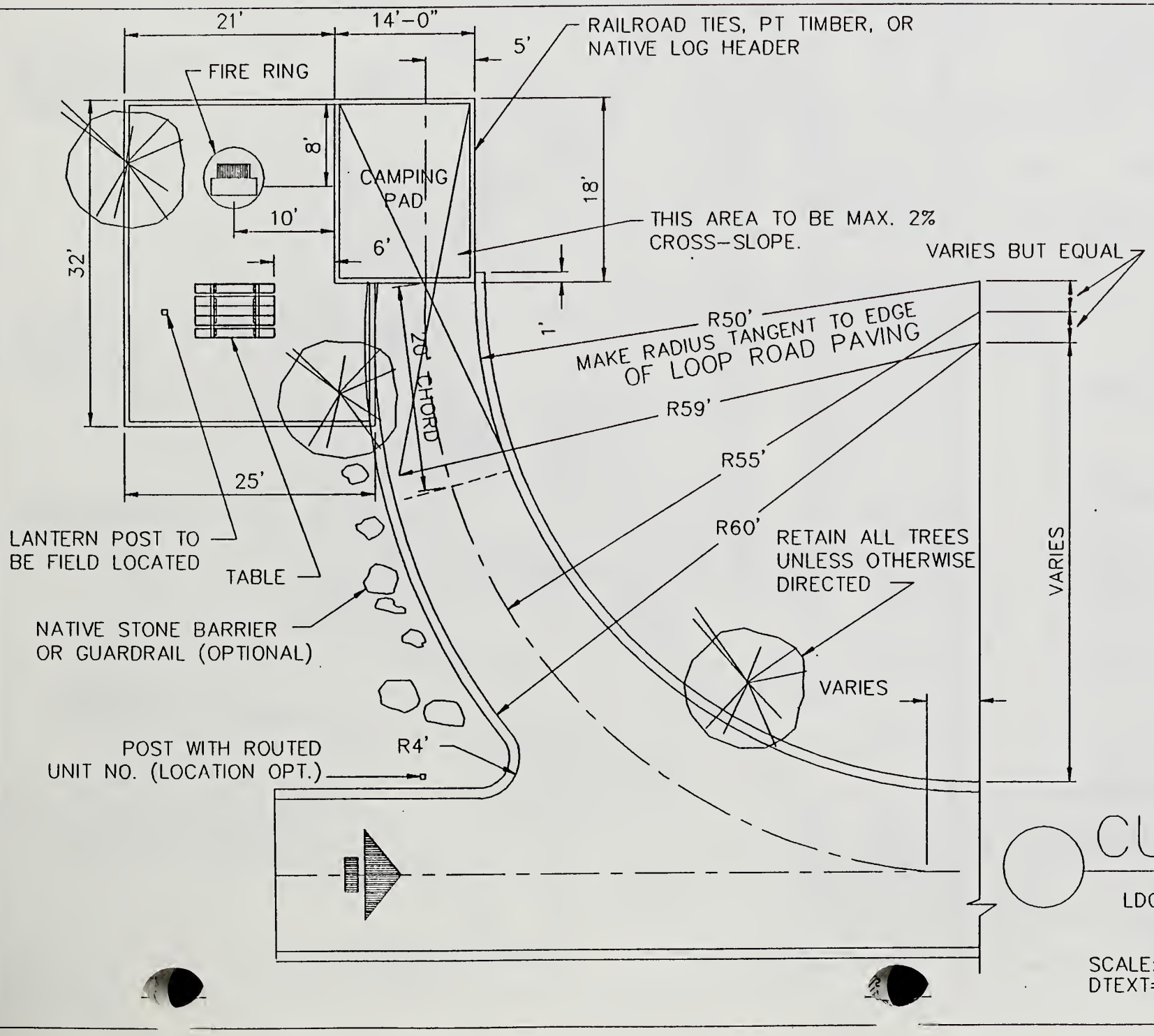
NOTES:
SHADED AREA TO BE REINFORCED WITH MATERIAL SELECTED BY THE LANDSCAPE ARCHITECT.

REINFORCED PAD TO BE DESIGNED TO ACCOMODATE SPECIFIC SITE CONDITIONS.

SCALE: 3/32"=1'-0" SETVAR DIMSCALE TO 128"
DTEXT=16",48" INSERT WBLOCK @ .00781

PULL THRU CAMP SPUR

LDCS8004 8-20-88 0 4' 8' 12'



NOTE:
SHADED AREA TO BE REINFORCED WITH MATERIAL SELECTED BY LANDSCAPE ARCHITECT.

REINFORCED PAD TO BE DESIGNED TO ACCOMODATE SPECIFIC SITE CONDITIONS.

CENTRAL GARBAGE COLLECTION MAY BE APPROPRIATE DEPENDING UPON SITE DESIGN AND ADMINISTRATION.

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

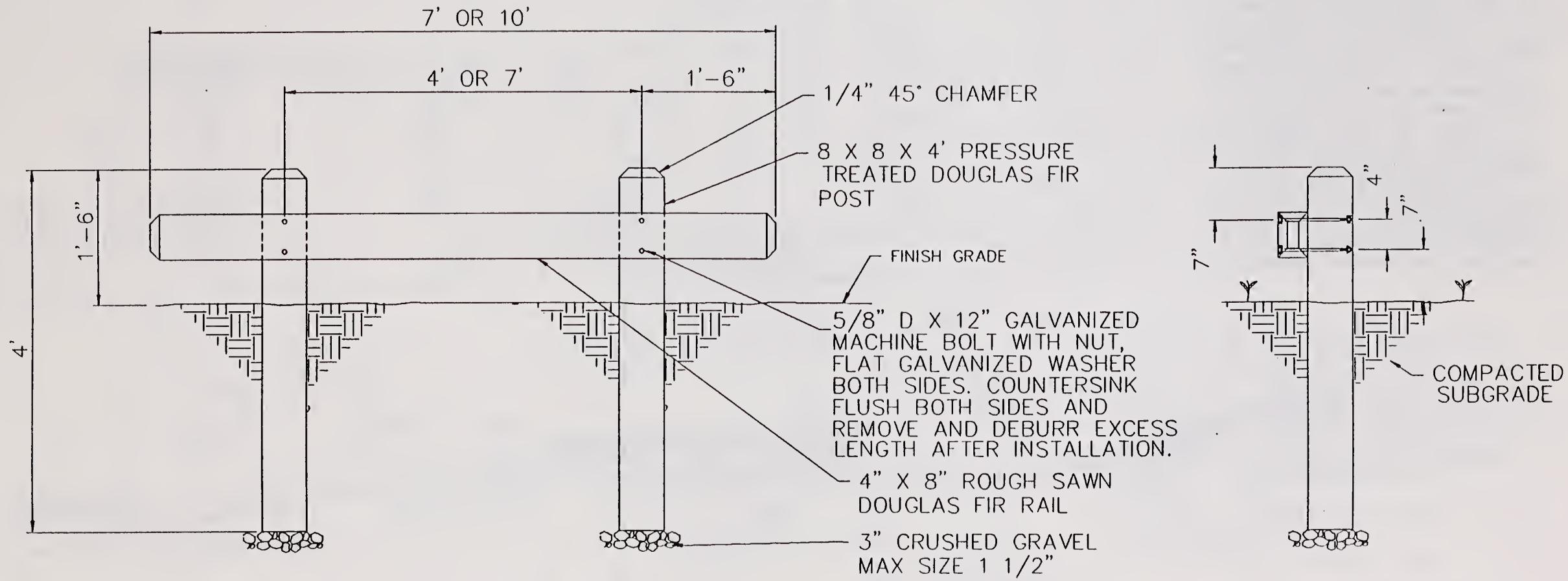
CURVED CAMP SPUR

LDCS8003 8-20-88

0 4' 8' 12'

SCALE: 3/32"=1'-0" SETVAR DIMSCALE TO 128"
DTEXT=16",48" INSERT WBLOCK @ .00781

THIS SHEET IS DISTRIBUTED FOR
INFORMATION PURPOSES, ONLY.
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CADD CONVERSION ERRORS.

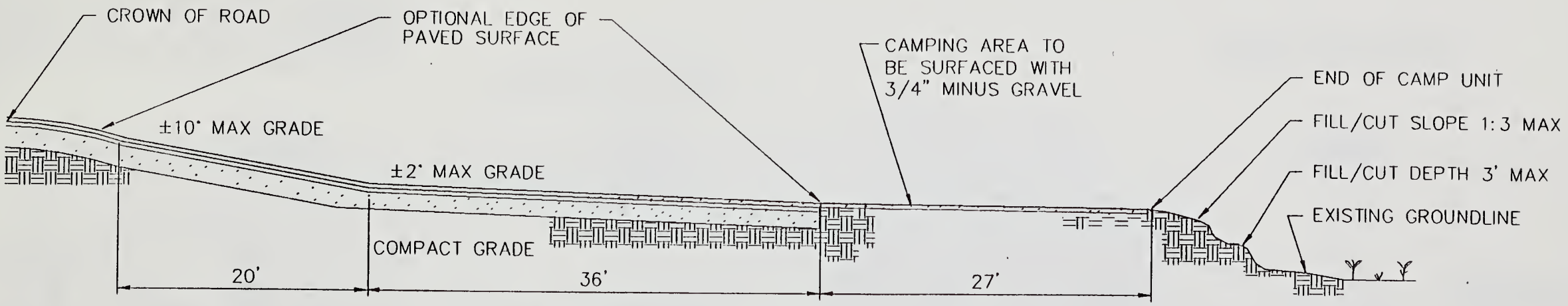


FRONT ELEVATION

RIGHT ELEVATION

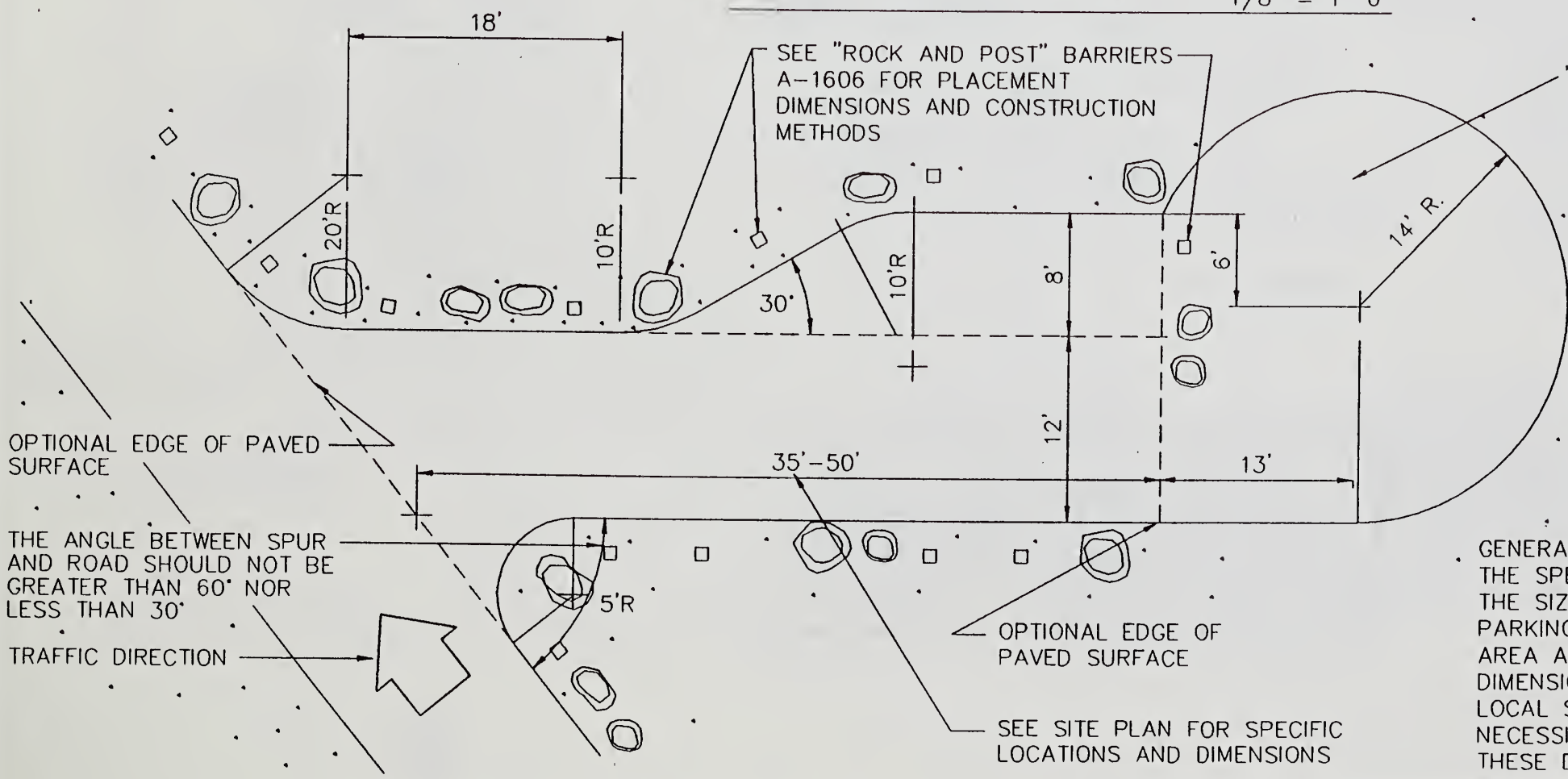
NOTES:
OPTIONAL 8"–10" POLE. NOTCH POLE 3" TO FIT POST. 1 1/4" 45° CHAMFER ON ENDS. STAIN ALL WOOD MEMBERS TO MATCH DESIGN THEME OR ENVIRONMENT.

WOOD RAIL BARRIER



TYPICAL SECTION

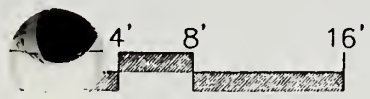
1/8" = 1'-0



GENERAL NOTES:
THE SPECIFIC DIMENSIONS FOR THE SIZE AND SHAPE OF THE PARKING SPUR AND "USE AREA" AREA ARE RECOMMENDED DIMENSIONS FOR AN AVERAGE SITE. LOCAL SITE CONDITIONS MAY NECESSITATE SOME ALTERATION OF THESE DIMENSIONS.

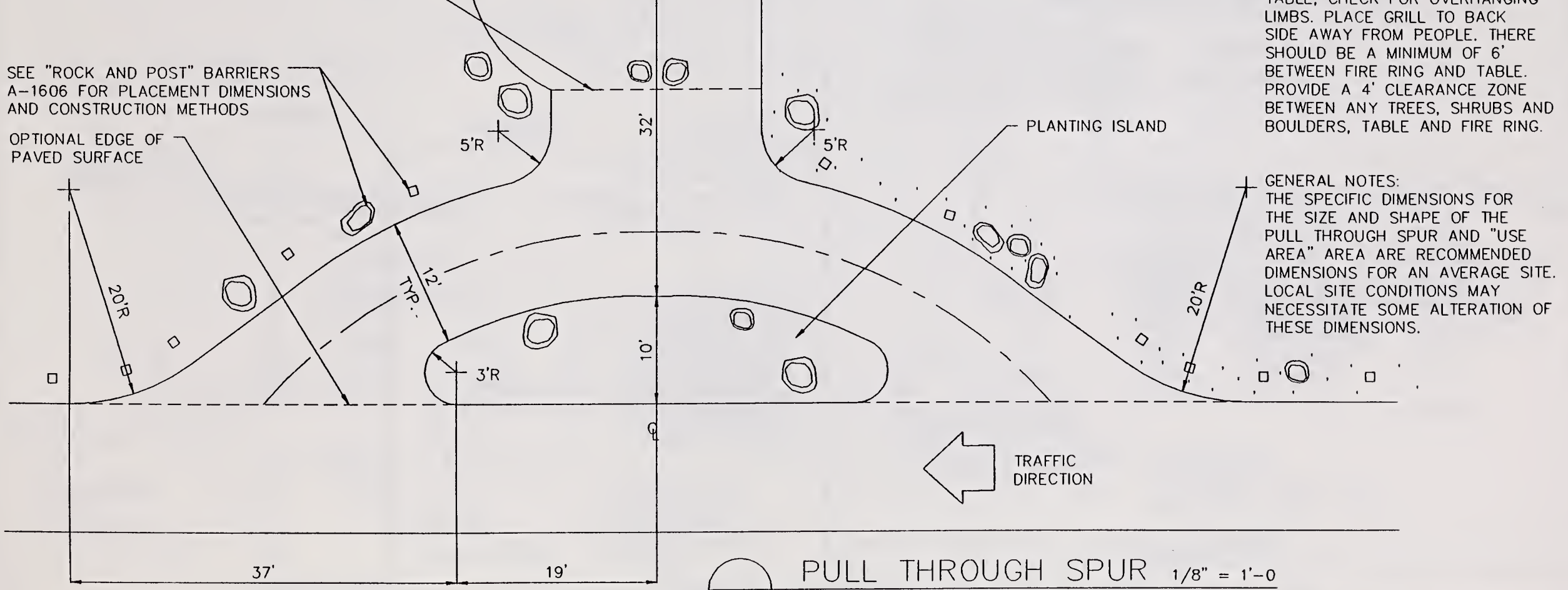
TYPICAL SPUR

LDCS 6001 1/8" = 1'-0"



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"USE AREA" ..AREA SHOULD BE LEVELED , GRADED FOR DRAINAGE AND A GRAVEL COURSE(3/4" MINUS) APPLIED TO THE SURFACE. LOCATE TABLE IN SHADE FOR AFTERNOON SUN AND ORIENT FOR BEST VIEW FROM BOTH SIDES OF TABLE. LOCATE FIRE RING DOWN WIND OF TABLE, CHECK FOR OVERHANGING LIMBS. PLACE GRILL TO BACK SIDE AWAY FROM PEOPLE. THERE SHOULD BE A MINIMUM OF 6' BETWEEN FIRE RING AND TABLE. PROVIDE A 4' CLEARANCE ZONE BETWEEN ANY TREES, SHRUBS AND BOULDERS, TABLE AND FIRE RING.

GENERAL NOTES:
THE SPECIFIC DIMENSIONS FOR THE SIZE AND SHAPE OF THE PULL THROUGH SPUR AND "USE AREA" AREA ARE RECOMMENDED DIMENSIONS FOR AN AVERAGE SITE. LOCAL SITE CONDITIONS MAY NECESSITATE SOME ALTERATION OF THESE DIMENSIONS.

PULL THROUGH SPUR 1/8" = 1'-0

LDCS 6002 11-15-88 0' 4' 8' 16'

4" X 4" X 18"
CORNER POST

2" X 6" MIN TREATED
DOUGLAS FIR RETAINER

16'

2" PEA GRAVEL ON TOP OF
COMPACTED NATIVE MATERIAL

2" X 4" X 18" STAKES PLACED
4'-0" O.C. PRESSURE TREATED

16'

PLAN

16' X 16' OPTIMUM, 14' X 10' BEST
SHAPE CAN BE IRREGULAR TO TAKE
ADVANTAGE OF SITE CONDITIONS

SAVE ALL TREES UNLESS
OTHERWISE DIRECTED

NOTES:
TREAT 2" X 4" RETAINER POSTS AND STAKES PENTACHLOROPHENOL. FASTEN STAKES AND CORNER POSTS TO EDGER WITH 10GA. COMMON GALVANIZED NAILS

CLEAR ROCKS LARGER THAN 2" DIA AND ROOTS DOWN TO 1'-0" BELOW SURFACE.

PRUNE ALL BRANCHES EXTENDING
INTO SITE AT THIS POINT

ORIGINAL GRADE

2" X 6" X 16' TREATED
DOUGLAS FUR

REPAIR LANDSCAPE W/
NATIVE PLANT OR SEED

7'

SLOPE 1/8"/FOOT

FINISH GRADE

SUBGRADE

RAKE ALL ROCKS AND ROOTS FROM
NATIVE MATERIAL MAKING UP
TENT PAD

4" X 4" X 18" CORNER POST
PRESSURE TREATED

ELEVATION

TYPICAL TENT SITE

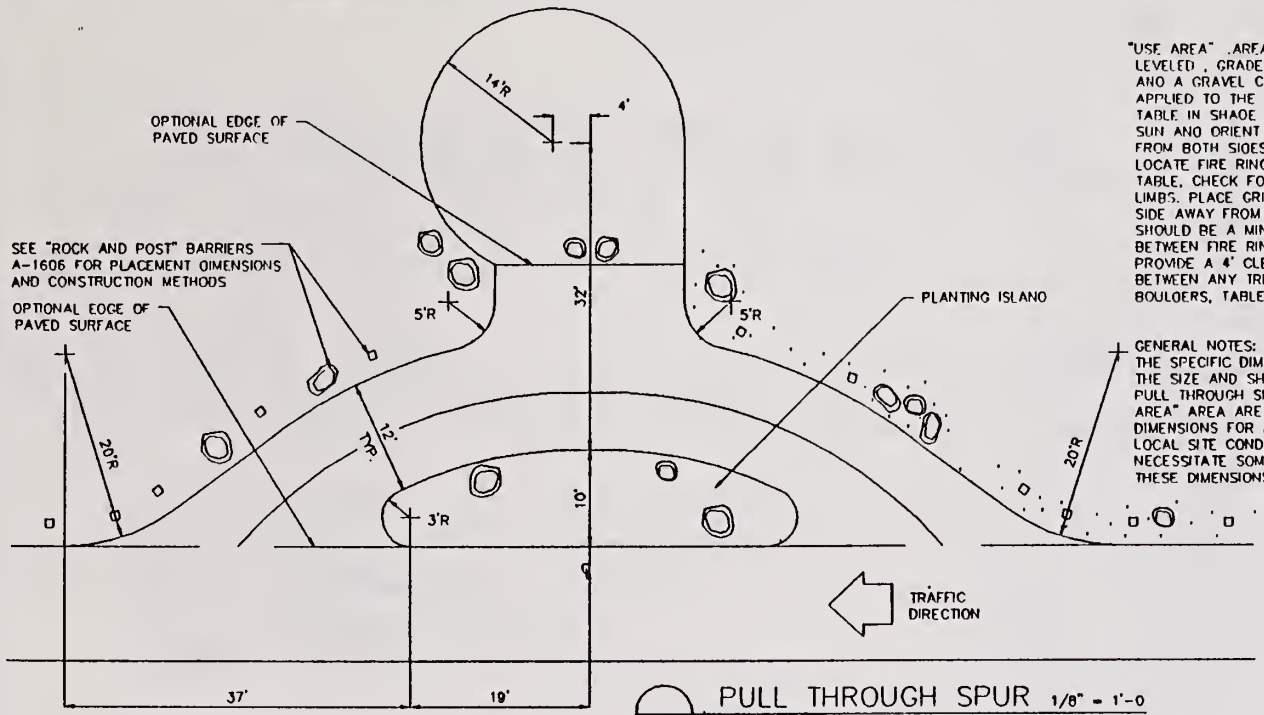
TS 6001 11-16-88 1/4" = 1'-0"

0' 2' 6' 10

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LDTS 6001 11-16-88 1/4" = 1'-0"

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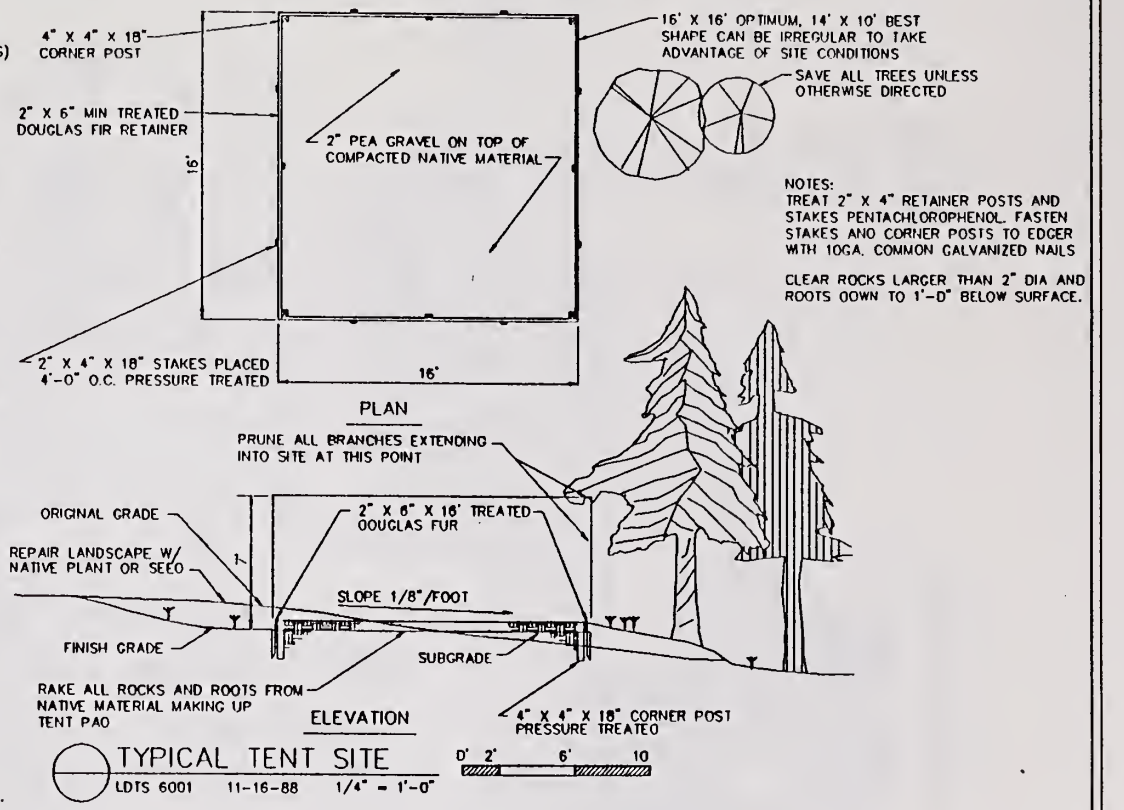


PULL THROUGH SPUR 1/8" = 1'-0

LDCS 6002 11-15-88 0' 4' 8' 16'

"USE AREA" .AREA SHOULD BE LEVELED , GRADED FOR DRAINAGE AND A GRAVEL COURSE(3/4" MINUS) APPLIED TO THE SURFACE. LOCATE TABLE IN SHADE FOR AFTERNOON SUN AND ORIENT FOR BEST VIEW FROM BOTH SIDES OF TABLE. LOCATE FIRE RING DOWN WIND OF TABLE, CHECK FOR OVERHANGING LIMBS. PLACE GRILL TO BACK SIDE AWAY FROM PEOPLE. THERE SHOULD BE A MINIMUM OF 6' BETWEEN FIRE RING AND TABLE. PROVIDE A 4' CLEARANCE ZONE BETWEEN ANY TREES, SHRUBS AND BOULDERS, TABLE AND FIRE RING.

GENERAL NOTES:
THE SPECIFIC DIMENSIONS FOR THE SIZE AND SHAPE OF THE PULL THROUGH SPUR AND "USE AREA" AREA ARE RECOMMENDED DIMENSIONS FOR AN AVERAGE SITE. LOCAL SITE CONDITIONS MAY NECESSITATE SOME ALTERATION OF THESE DIMENSIONS.



PLAN

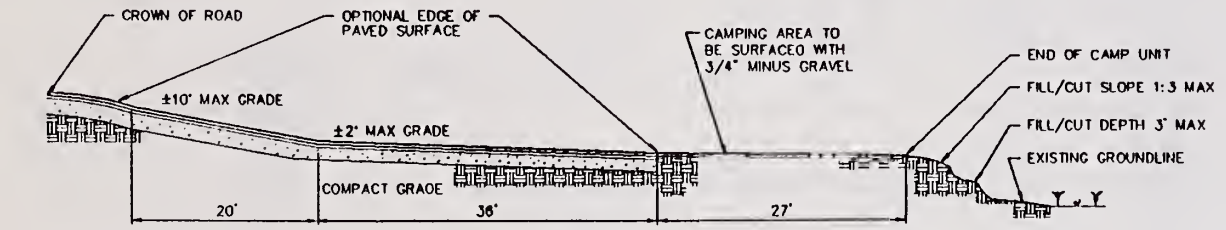
ELEVATION

NOTES:
TREAT 2" X 4" RETAINER POSTS AND STAKES PENTACHLOROPHENOL. FASTEN STAKES AND CORNER POSTS TO EDGER WITH 10GA. COMMON GALVANIZED NAILS

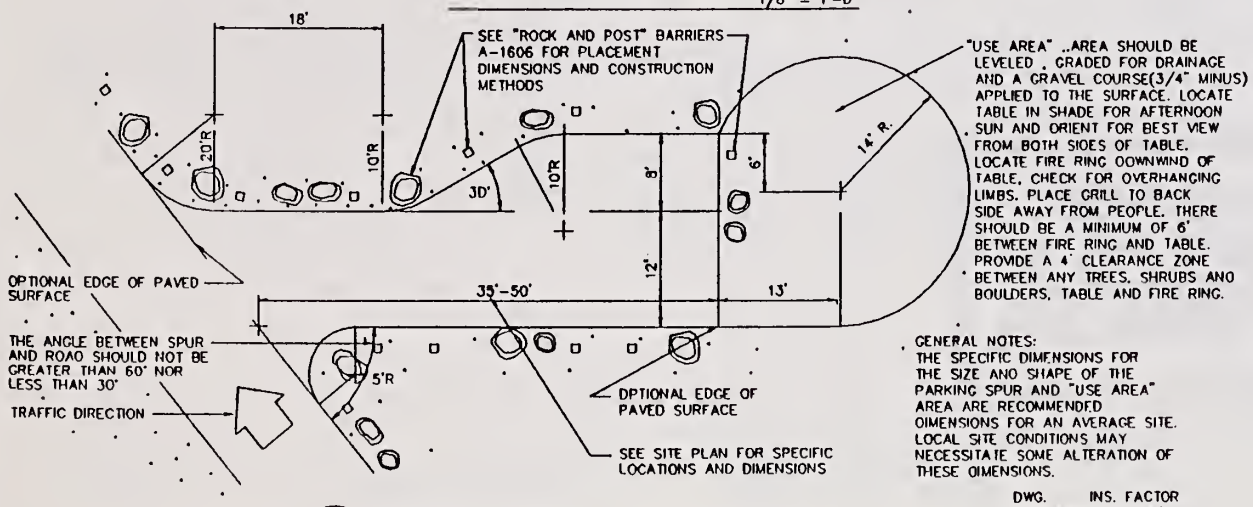
CLEAR ROCKS LARGER THAN 2" DIA AND ROOTS DOWN TO 1'-0" BELOW SURFACE.

TYPICAL TENT SITE

LDTS 6001 11-16-88 1/4" = 1'-0" 0' 2' 6' 10'



TYPICAL SECTION 1/8" = 1'-0

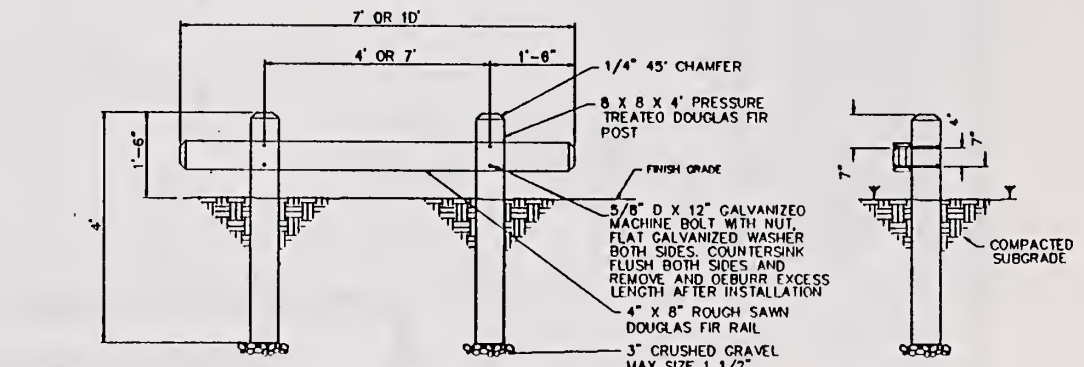


"USE AREA" ..AREA SHOULD BE LEVELED , GRADED FOR DRAINAGE AND A GRAVEL COURSE(3/4" MINUS) APPLIED TO THE SURFACE. LOCATE TABLE IN SHADE FOR AFTERNOON SUN AND ORIENT FOR BEST VIEW FROM BOTH SIDES OF TABLE. LOCATE FIRE RING DOWNWIND OF TABLE, CHECK FOR OVERHANGING LIMBS. PLACE GRILL TO BACK SIDE AWAY FROM PEOPLE. THERE SHOULD BE A MINIMUM OF 6' BETWEEN FIRE RING AND TABLE. PROVIDE A 4' CLEARANCE ZONE BETWEEN ANY TREES, SHRUBS AND BOULDERS, TABLE AND FIRE RING.

GENERAL NOTES:
THE SPECIFIC DIMENSIONS FOR THE SIZE AND SHAPE OF THE PARKING SPUR AND "USE AREA" AREA ARE RECOMMENDED DIMENSIONS FOR AN AVERAGE SITE. LOCAL SITE CONDITIONS MAY NECESSITATE SOME ALTERATION OF THESE DIMENSIONS.

TYPICAL SPUR

DWG.	INS. FACTOR
LOTS 6001	.02083
LDBF 6006	.0625
LDCS 6002	.01042



NOTES:
OPTIONAL 8'-10' POLE. NOTCH POLE 3" TO FIT POST. 1 1/4" 45° CHAMFER ON ENDS. STAIN ALL WOOD MEMBERS TO MATCH DESIGN THEME OR ENVIRONMENT.

FRONT ELEVATION

RIGHT ELEVATION

WOOD RAIL BARRIER

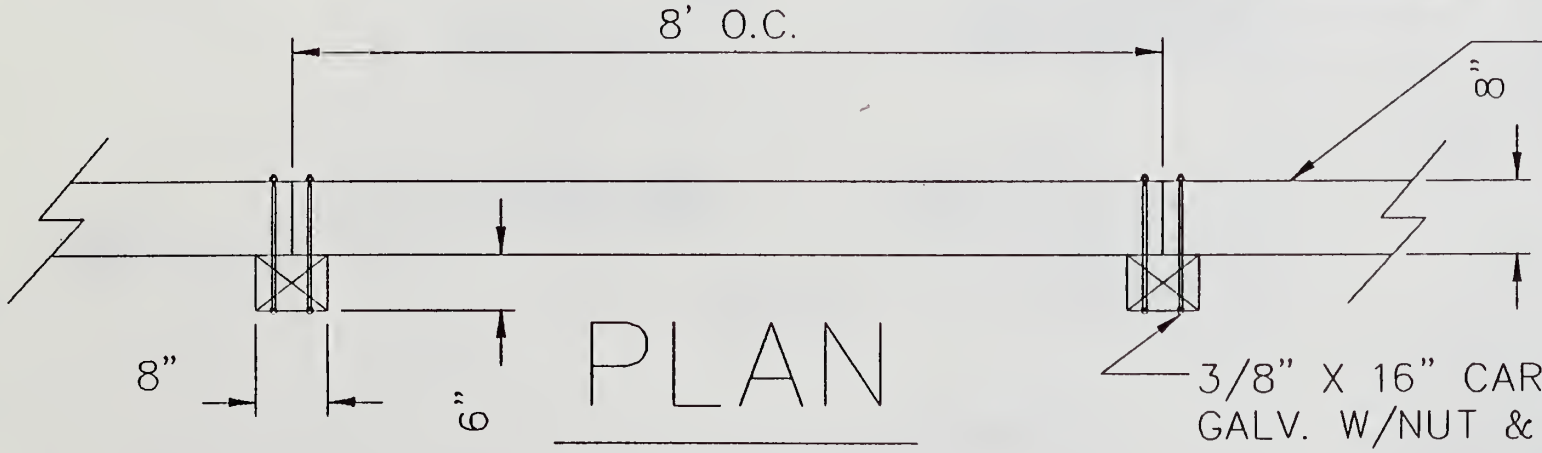
LDBF 6006 11-17-88 1' 6"3"0' 1' 2'

CAMPSITE DETAILS 11-17-88

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

CAMPSITE DETAILS

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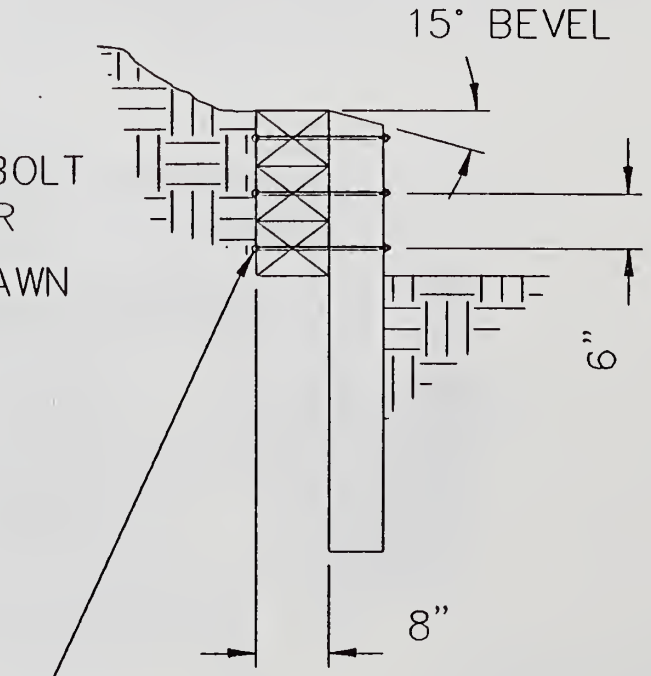
PLAN

ELEVATION

6" X 8" X 8' NEW ROUGH SAWN PRESSURE TREATED RAILROAD TIE

3/8" X 16" CARRIAGE BOLT GALV. W/NUT & WASHER

6" X 8" X 8' ROUGH SAWN PRESSURE TREATED RAILROAD TIE.



3/8" X 16" CARRIAGE BOLT GALV. W/ NUT & WASHER

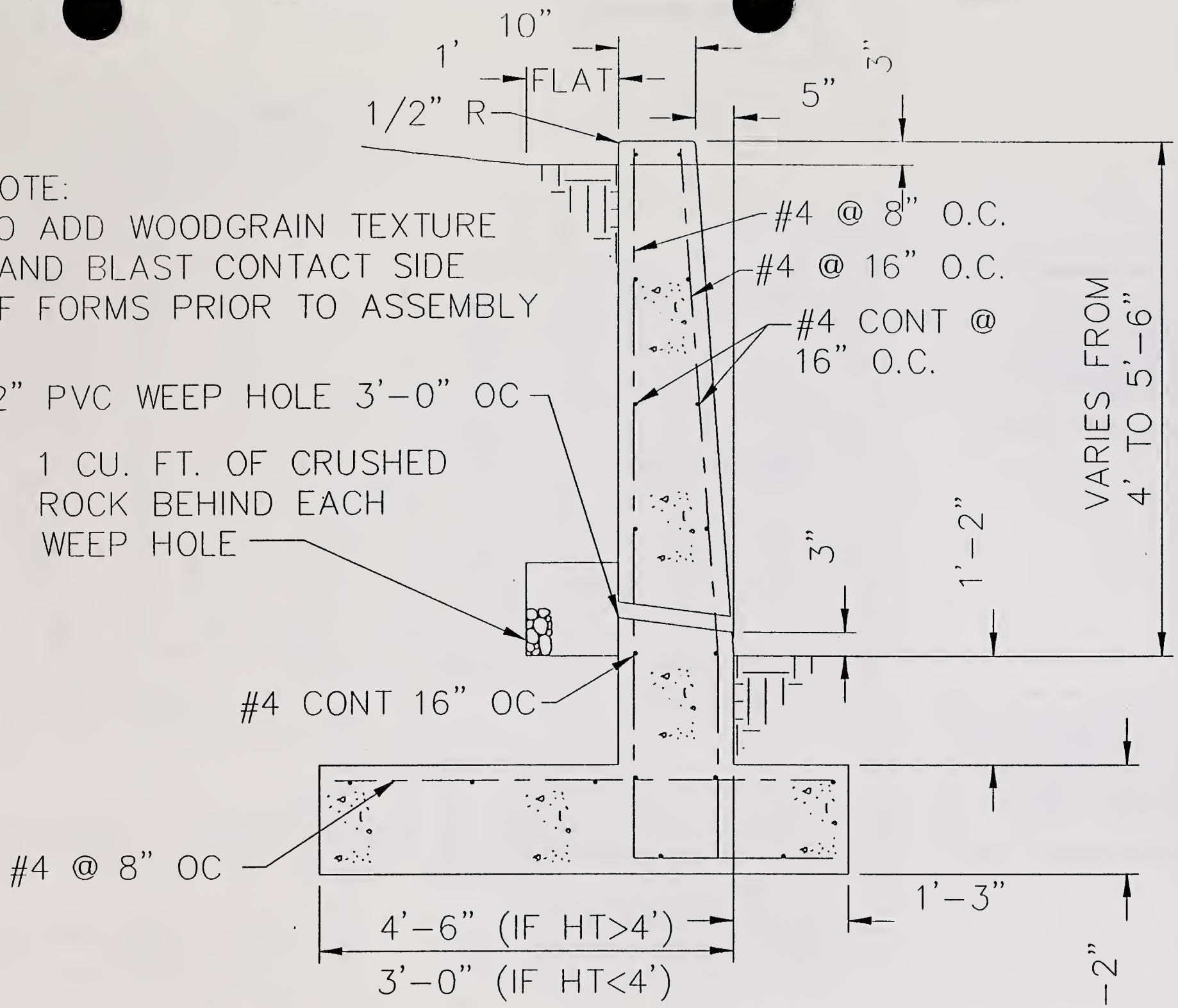
SECTION

TIMBER RETAINING WALL

LDWA6009 8-20-88

0 1 2 3'

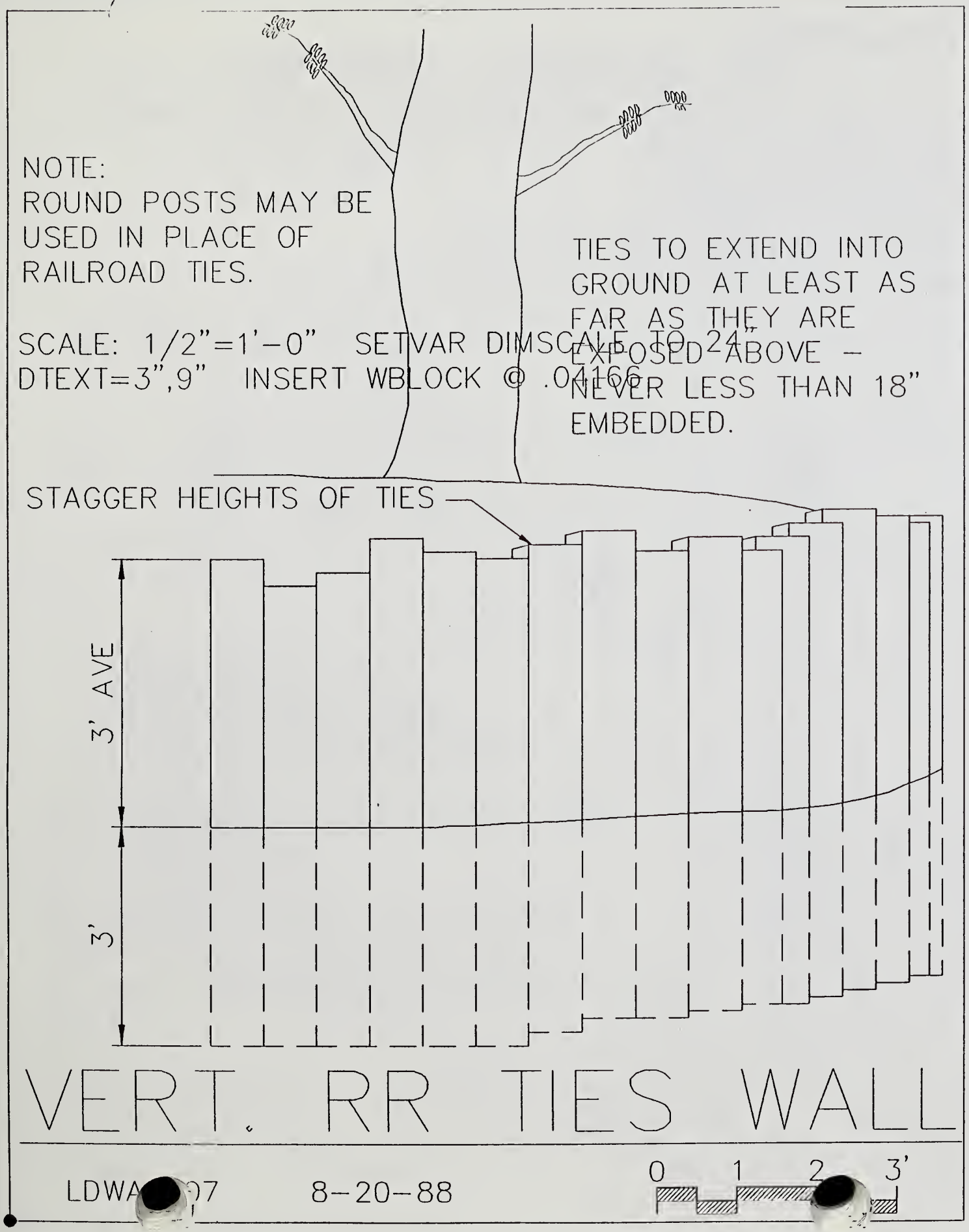
SCALE: 1/2"=1'-0" SETVAR DIMSCALE TO 24"
DTEXT=3",9" INSERT WBLOCK @ .04166



CONCRETE WALL

SCALE: 1/2"=1'-0" SETVAR DIMSCALE TO 24"
DTEXT=3",9" INSERT WBLOCK @ .04166 1 2 3'

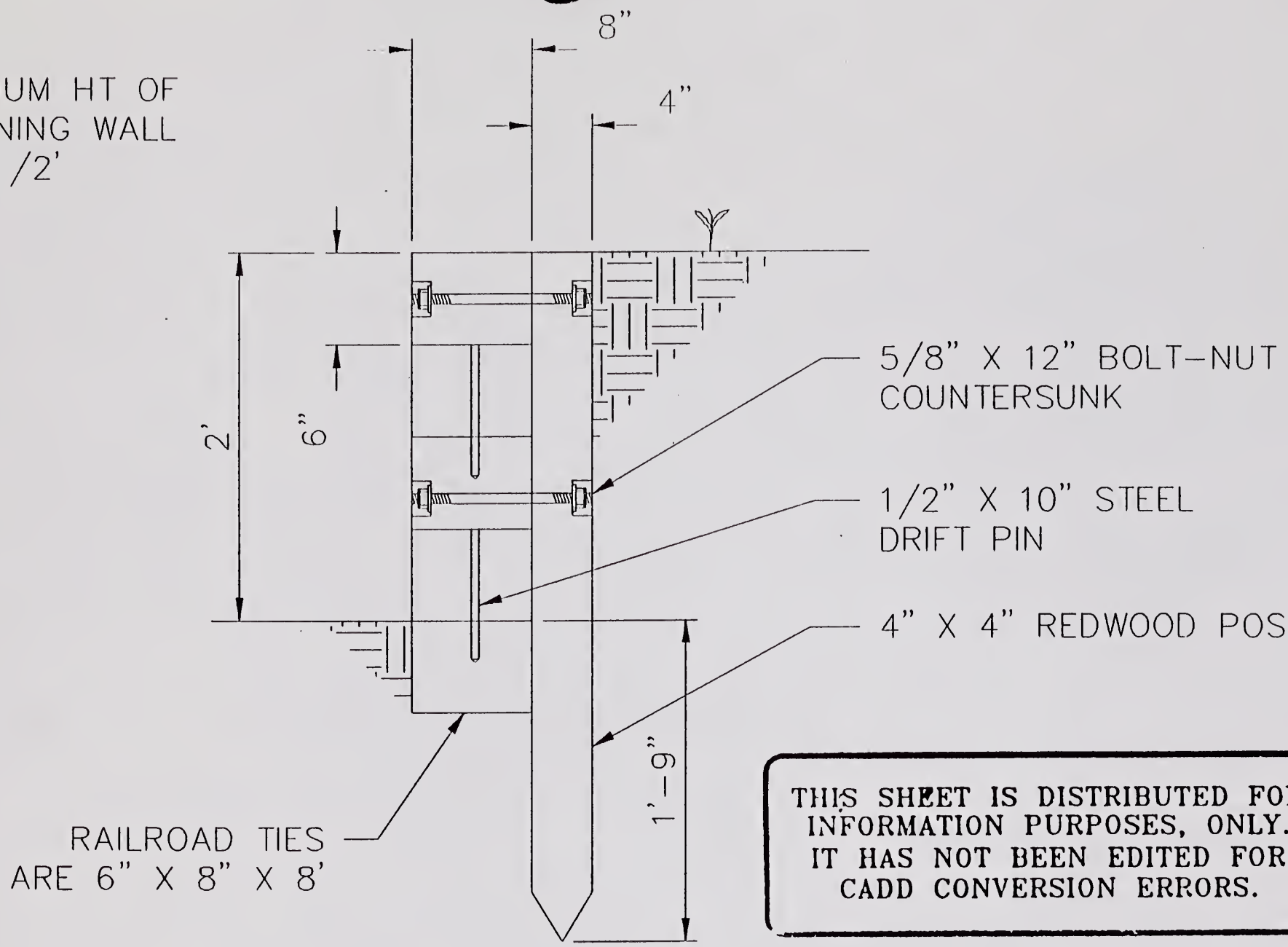
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THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

LDWA2006 8-20-88

NOTE:
MAXIMUM HT OF
RETAINING WALL
IS 2 1/2'



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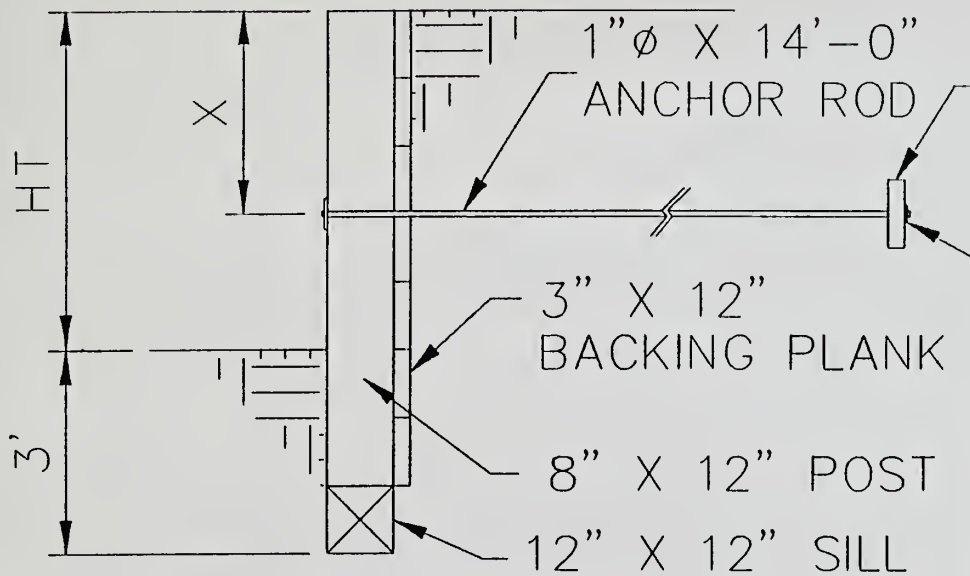
HORIZ. RAILROAD TIES WALL

LDWA2006 8-20-88

0 1/2 1 2 3'

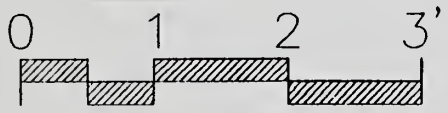
SCALE: 1"=1'-0" SETVAR DIMSCALE TO 12"
DTEXT=1 1/2" 4 1/2" INSERT WBLOCK @ .08333

SCALE: 1/8"=1'-0" SETVAR DIMSCALE TO 96
DTEXT=12",36" INSERT WBLOCK @ .01042

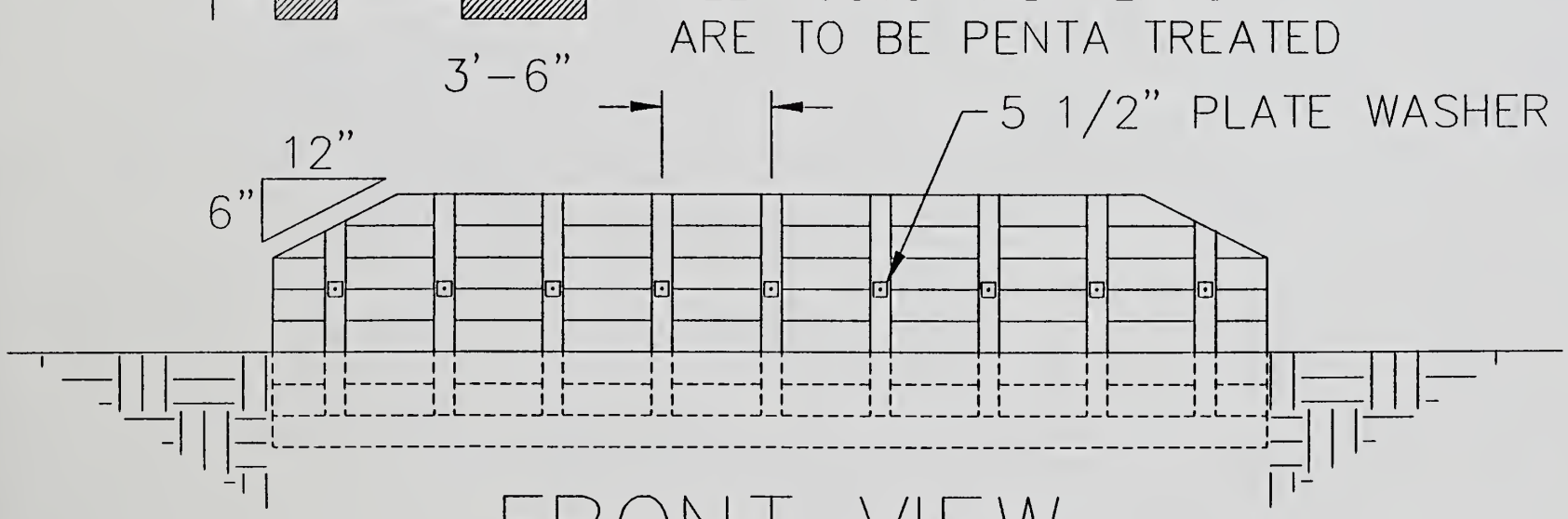


HT. OF WALL	X DIST.
UP TO 5'-0"	3'-1"
6'-0"	3'-10"
7'-0"	4'-10"

SIDE VIEW



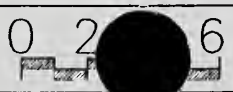
NOTE:
ALL POSTS AND PLANS
ARE TO BE PENTA TREATED



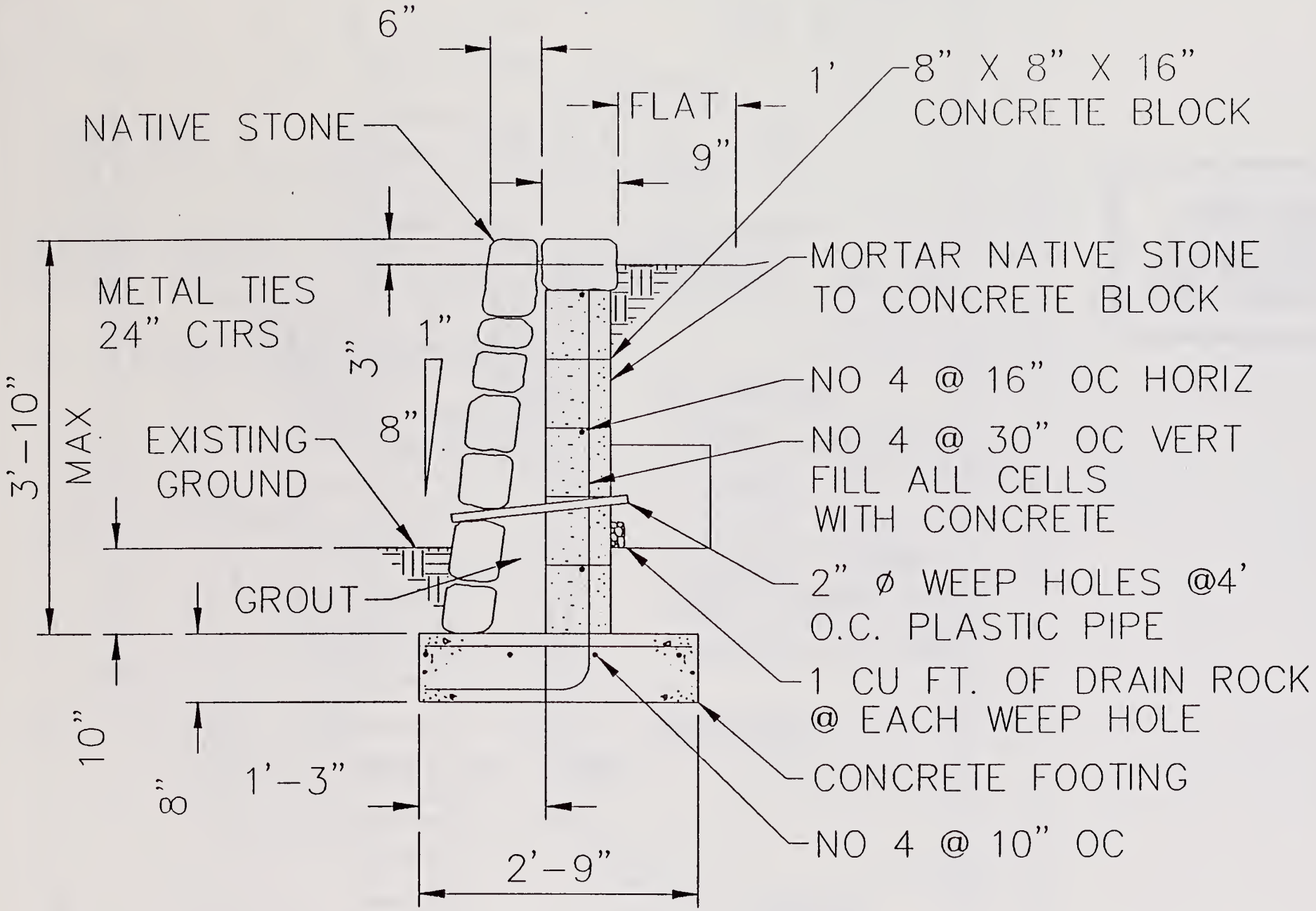
FRONT VIEW

TREATED TIMBER WALL

LDWA2005 8-20-88



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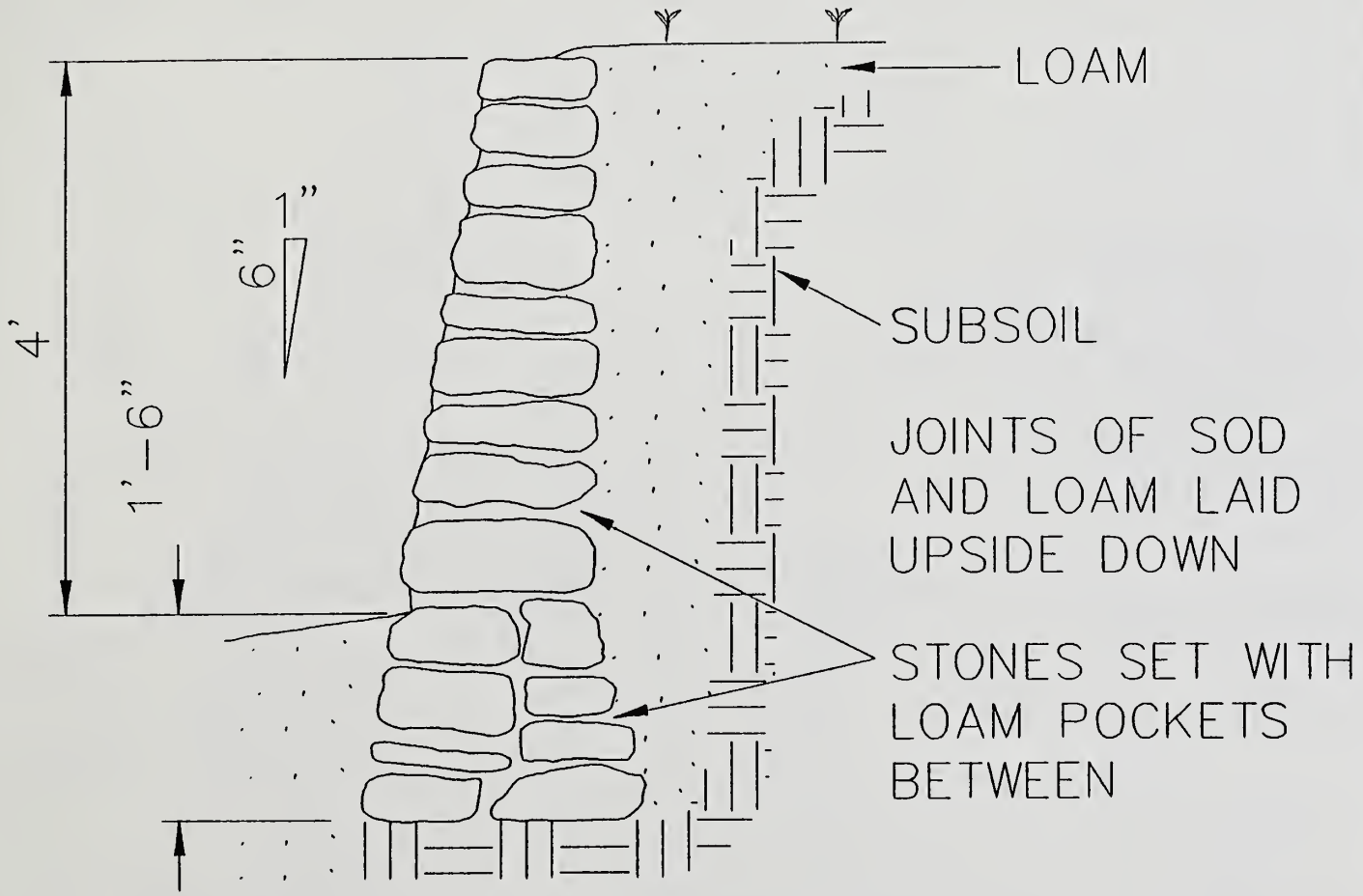
STONE VENEER WALL

LDWA2004 8-20-88

SCALE: 1/2"=1'-0" SETVAR DIMSCALE TO 24"
DTEXT=3",9" INSERT WBLOCK @ .04166

0 1 2 3'

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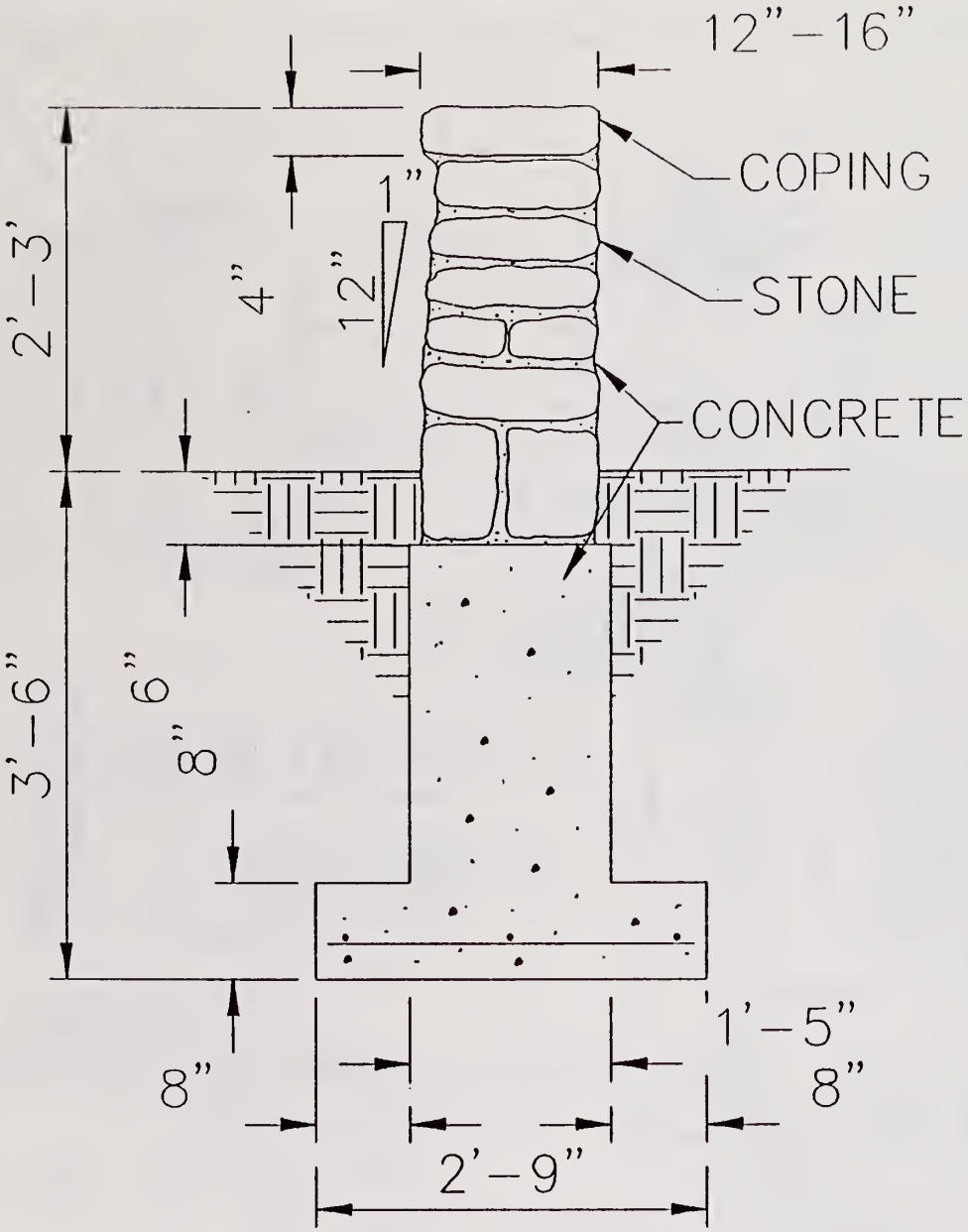
SCALE: 1/2"=1'-0" SETVAR DIMSCALE TO 24"
DTEXT=3",9" INSERT WBLOCK @ .04166

NATIVE ROCK DRY CONST WALL

LDWA2003 8-10-88

0 1 2 3'

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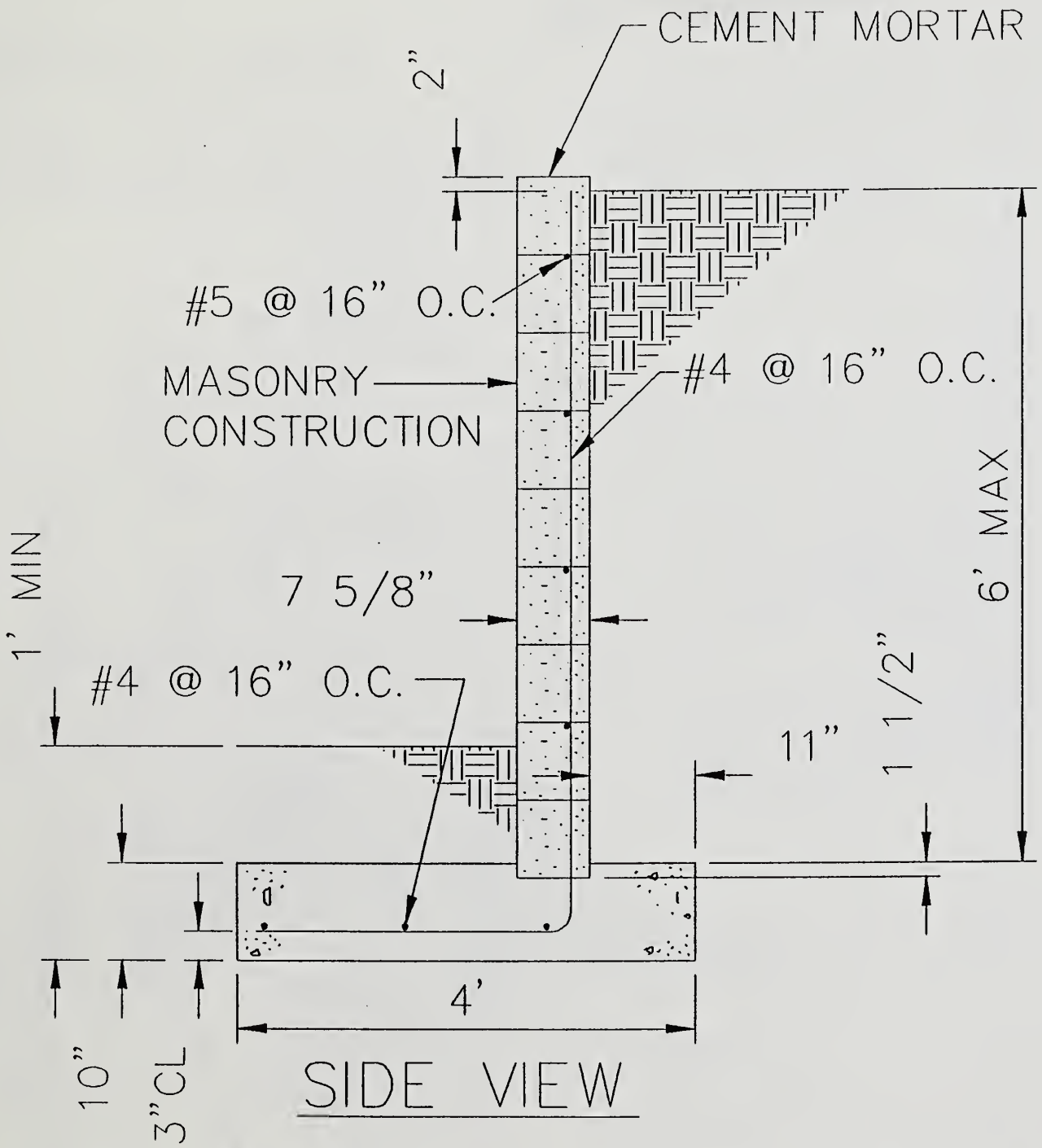
MASONRY WALL

LDWA2002 8–9–88

0 1 2 3'

SCALE: 1/2"=1'–0" SETVAR DIMSCALE TO 24"
DTEXT=3",9" INSERT WBLOCK @ .04166

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SIDE VIEW

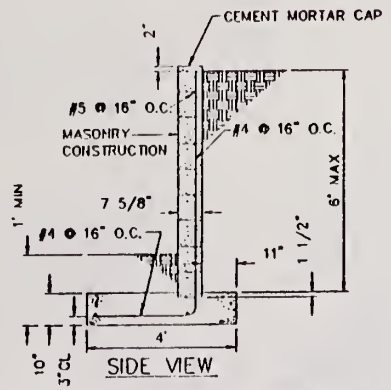
CONC BLOCK WALL

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LDWA2001 8-20-88

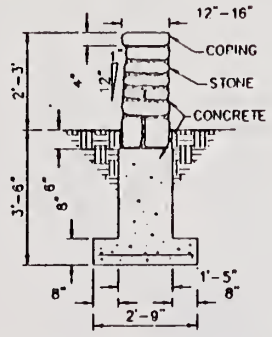
SCALE: 1/2"=1'-0" SETVAR DIMSCALE TO 24 0 1 2 3'

DTEXT=( )" INSERT WBLOCK @ .04166



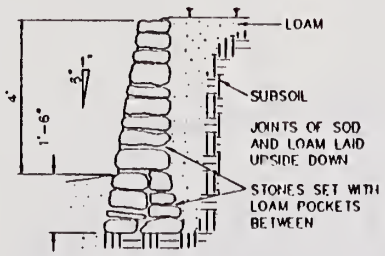
CONC BLOCK WALL

LDWA2001 8-20-88 0 1 2 3'



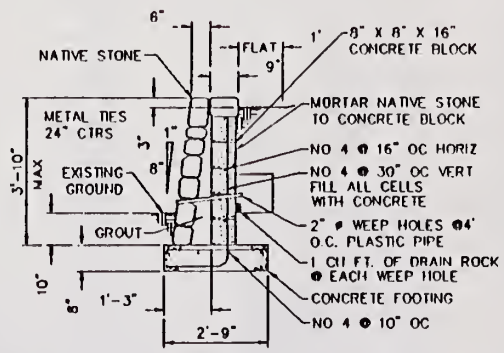
MASONRY WALL

LDWA2002 8-9-88 0 1 2 3'



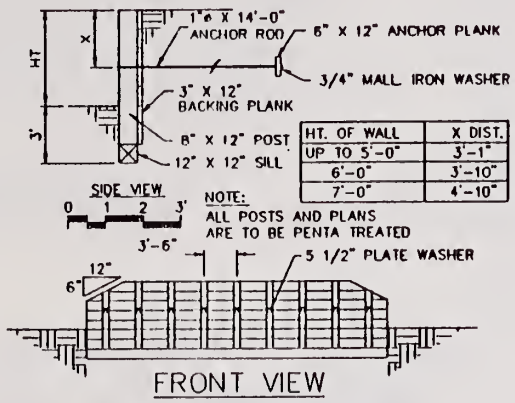
NATIVE ROCK DRY CONST WALL

LDWA2003 8-10-88 0 1 2 3'



STONE VENEER WALL

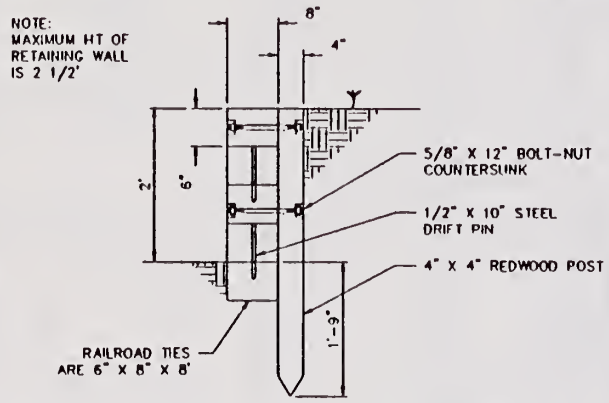
LDWA2004 8-20-88 0 1 2 3'



HT. OF WALL	X DIST.
UP TO 5'-0"	3'-1"
6'-0"	3'-10"
7'-0"	4'-10"

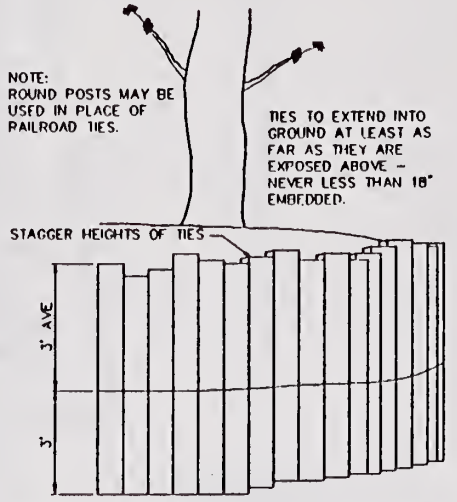
TREATED TIMBER WALL

LDWA2005 8-20-88 0 2 4 6'



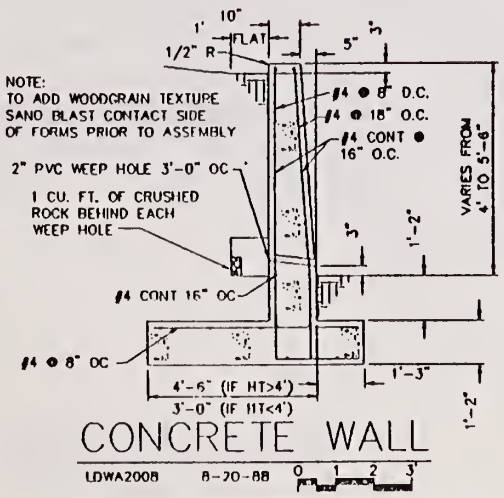
HORIZ. RAILROAD TIES WALL

LDWA2006 8-20-88 0 1/2 1 2 3'



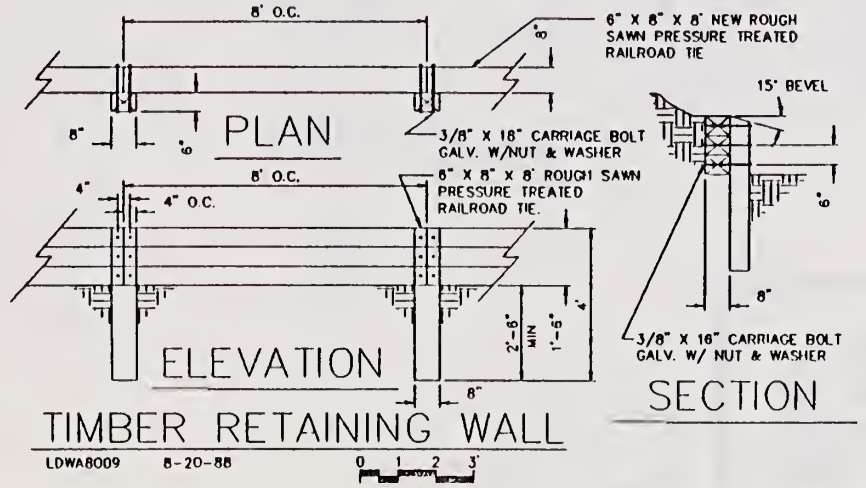
VERT. RR TIES WALL

LDWA2007 8-20-88 0 1 2 3'



CONCRETE WALL

LDWA2008 8-20-88 0 1 2 3'



TIMBER RETAINING WALL

LDWA8009 8-20-88 0 1 2 3'

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THE PACIFIC NORTHWEST REGION

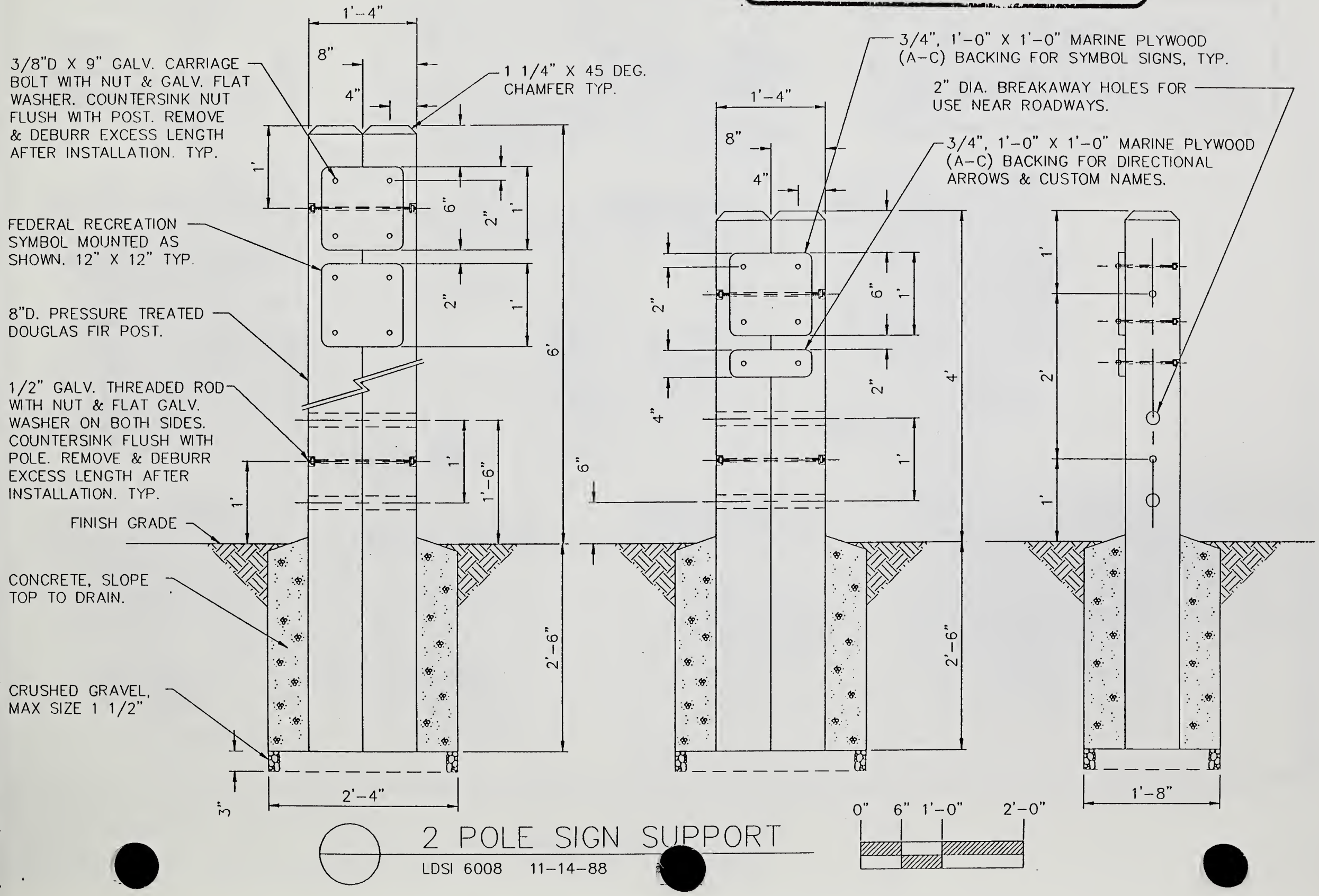
DRAWN	RLCARTER	DATE	8-23-88
DESIGNED		DATE	
CHECKED		DATE	
REVIEWED		DATE	

WALL DETAILS
8-23-88

REC00004

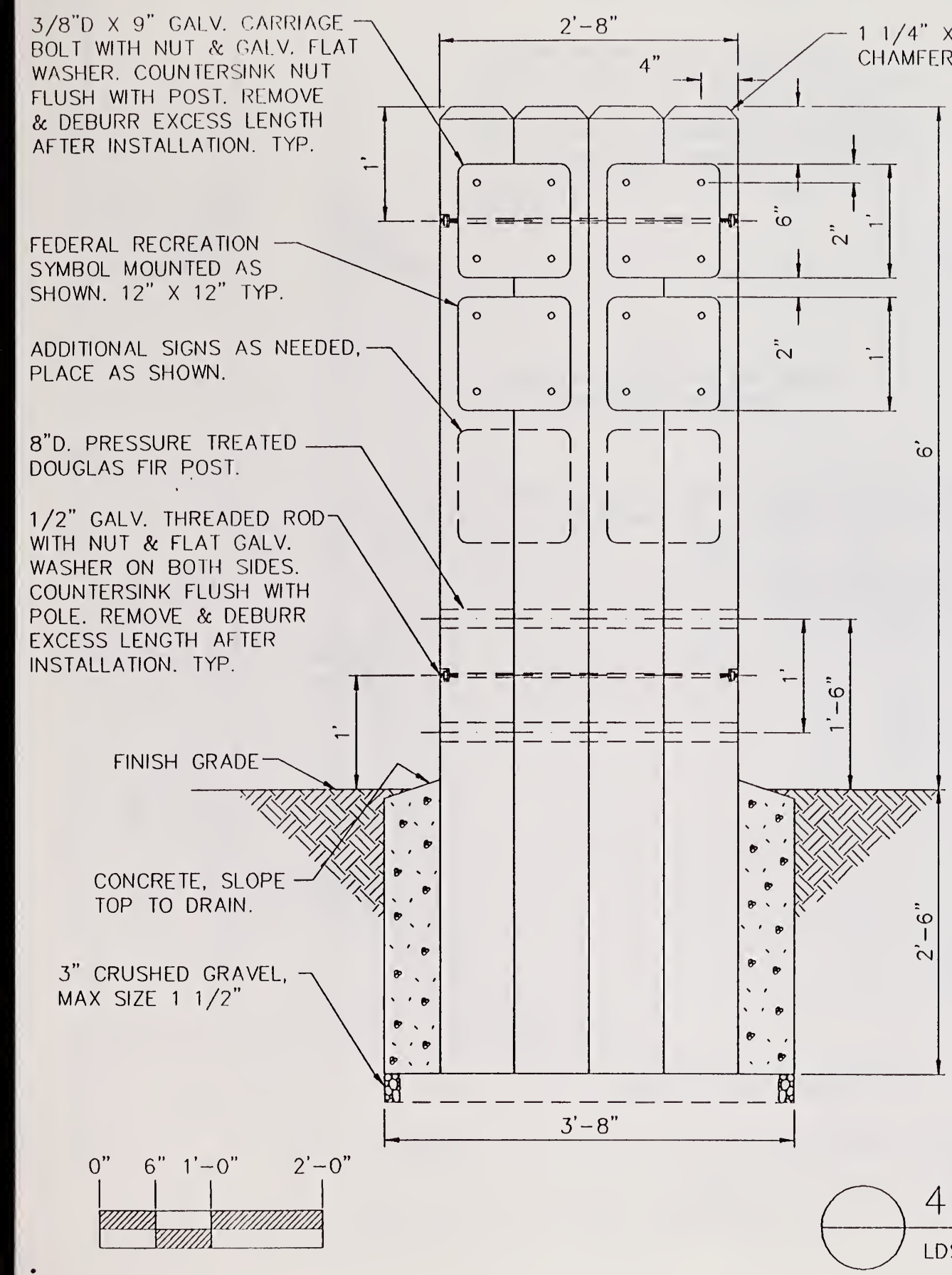
SHT.
OF

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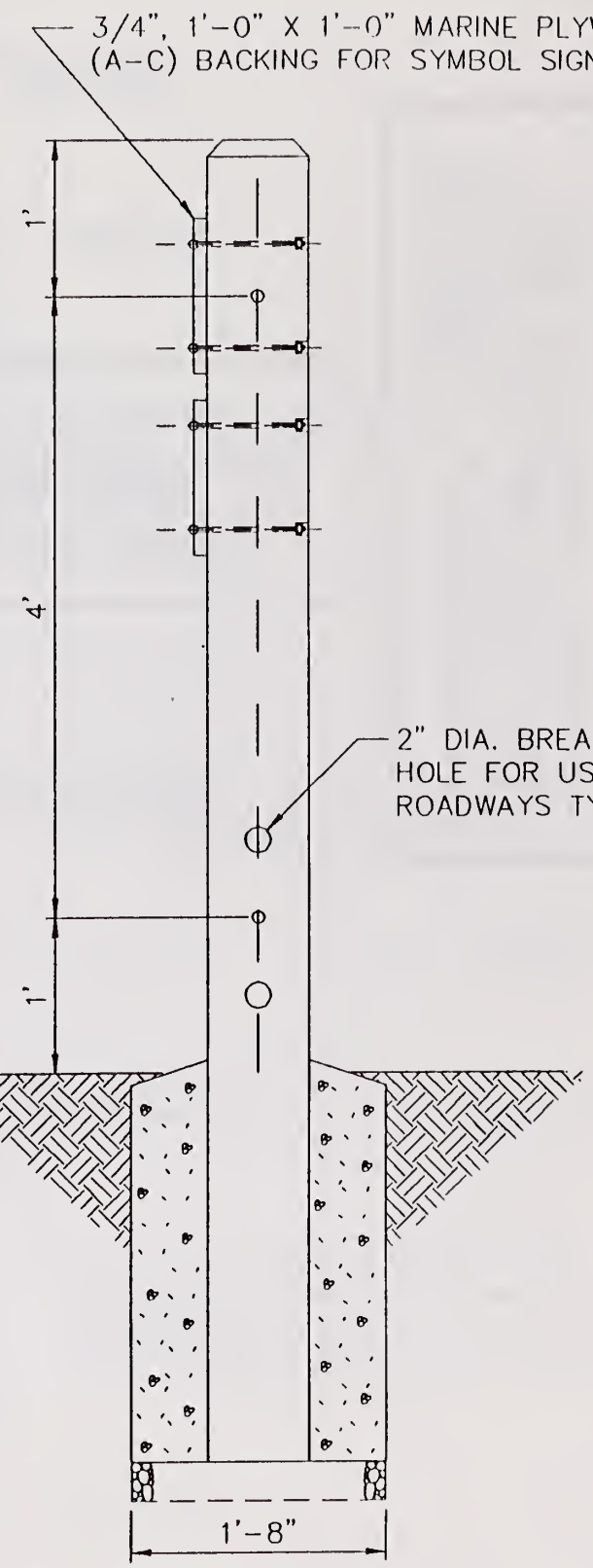


2 POLE SIGN SUPPORT

LDSI 6008 11-14-88

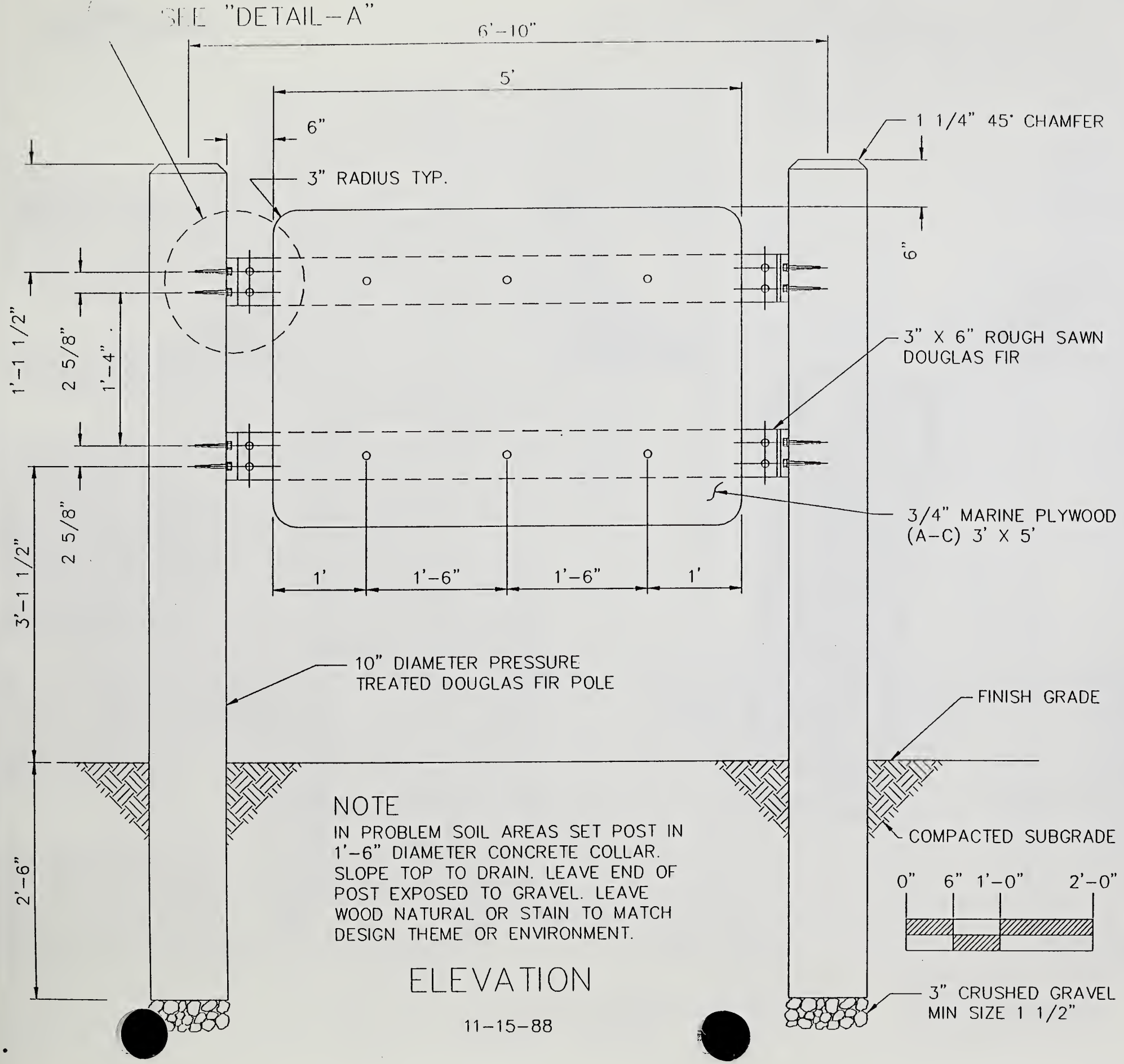


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4 POLE SIGN SUPPORT

LDSI 6007 11-14-88



NOTE

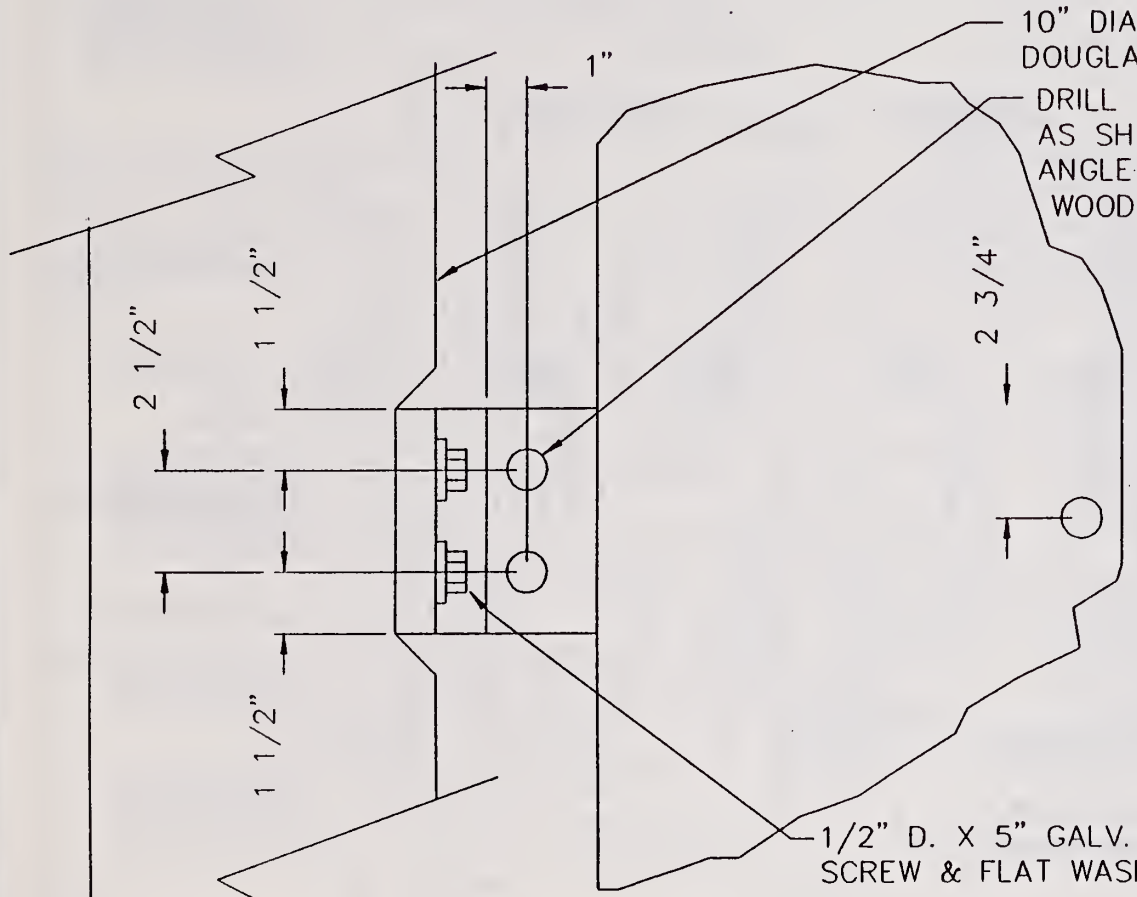
IN PROBLEM SOIL AREAS SET POST IN 1'-6" DIAMETER CONCRETE COLLAR. SLOPE TOP TO DRAIN. LEAVE END OF POST EXPOSED TO GRAVEL. LEAVE WOOD NATURAL OR STAIN TO MATCH DESIGN THEME OR ENVIRONMENT.

ELEVATION

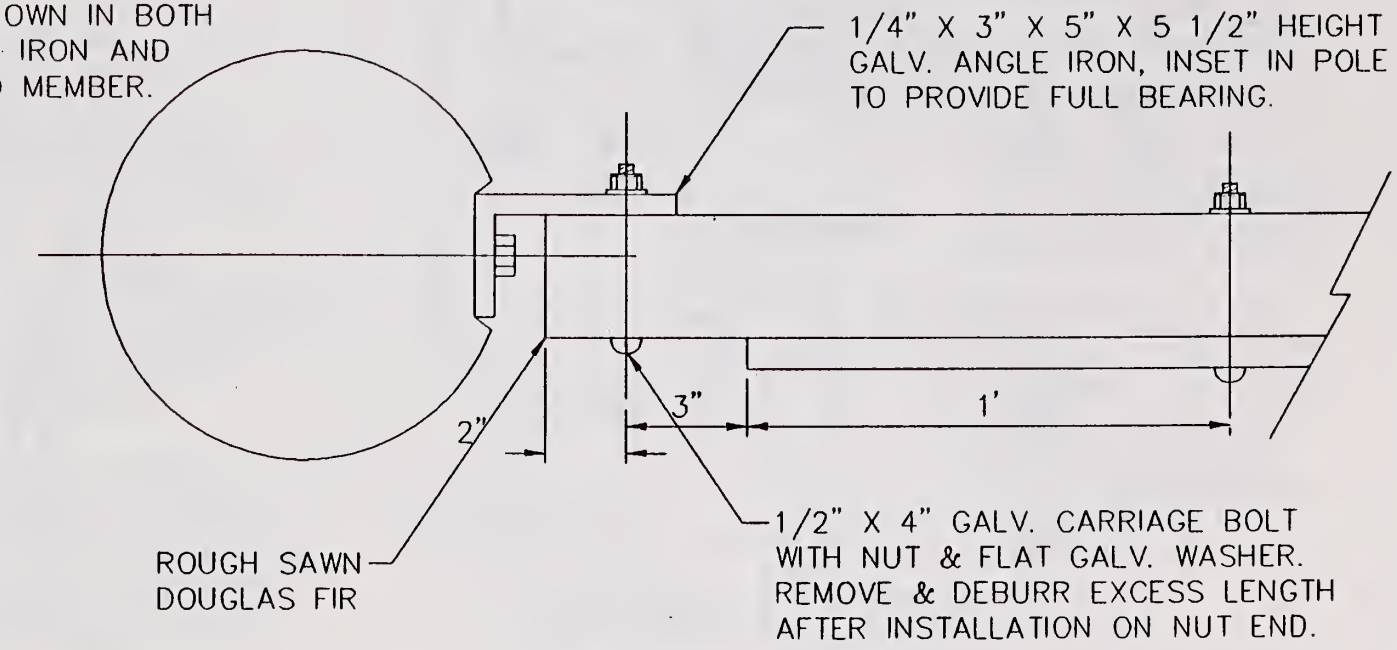
11-15-88

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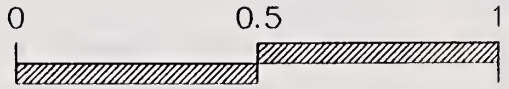
ELEVATION



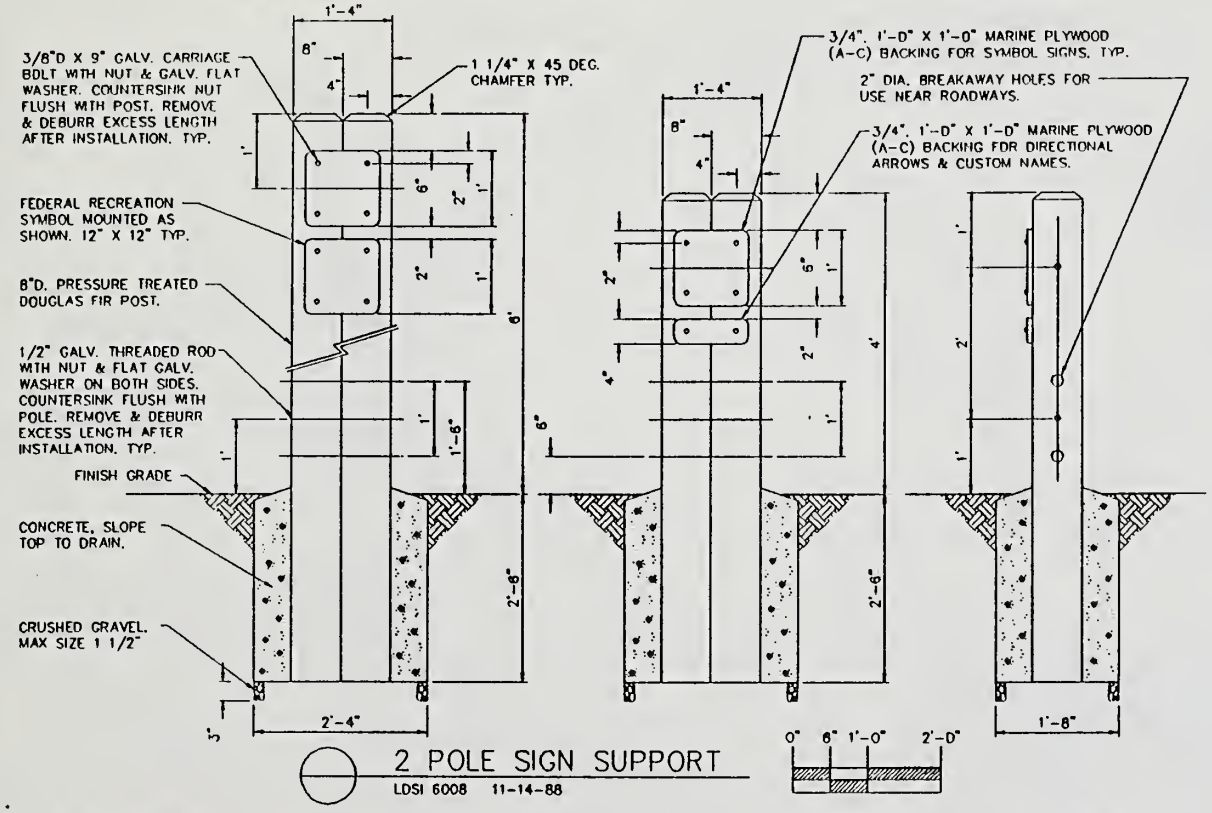
PLAN

DETAIL-A
BULLETIN BOARD

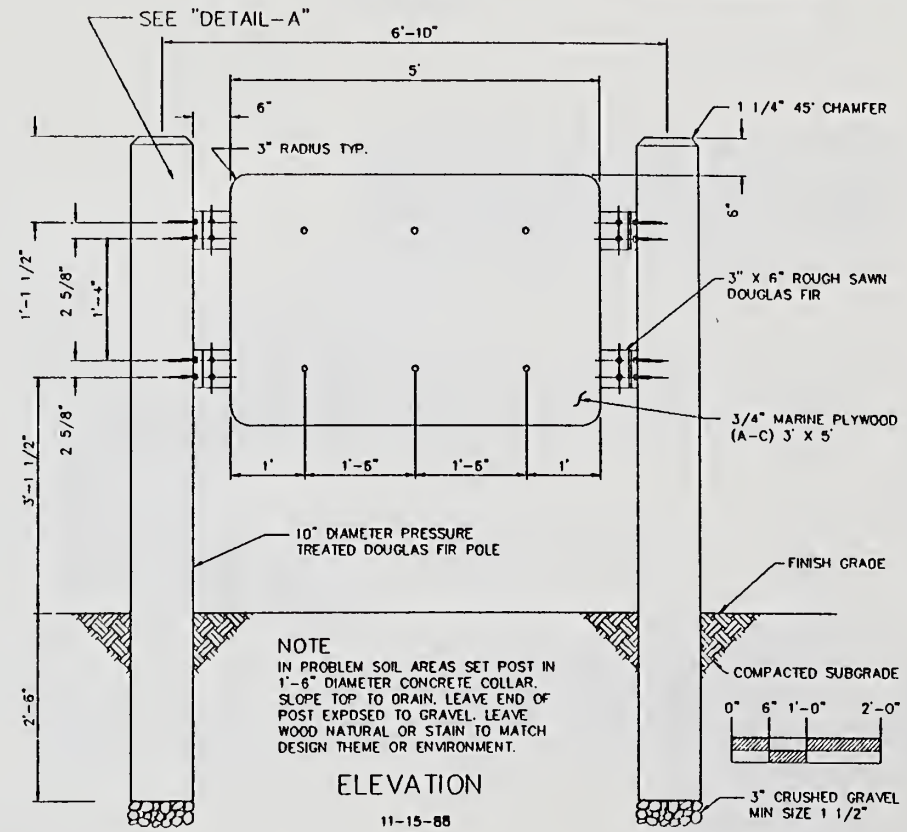
LDSI 6001 11-15-88



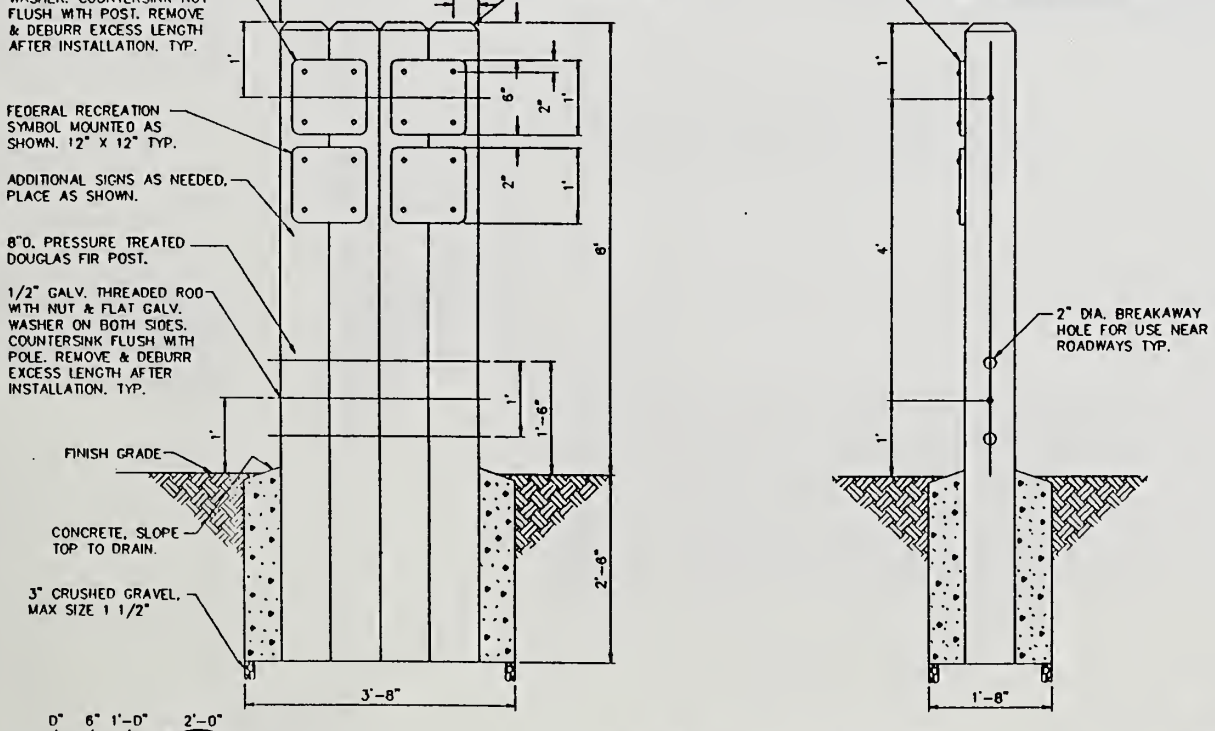
INFORMATION PURPOSES, ONLY.
IT HAS NOT BEEN EDITED FOR
CADD CONVERSION ERRORS.



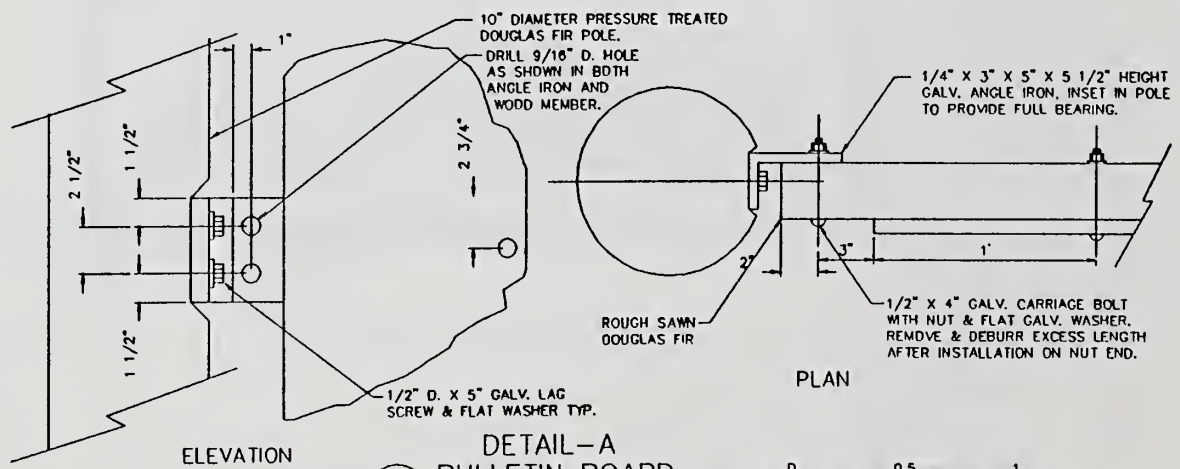
2 POLE SIGN SUPPORT
LOSI 6008 11-14-88



ELEVATION
11-15-88



4 POLE SIGN SUPPORT
LOSI 6007 11-14-88



ELEVATION

PLAN

DETAIL-A
BULLETIN BOARD
LOSI 6001 11-15-88

D 0.5 1

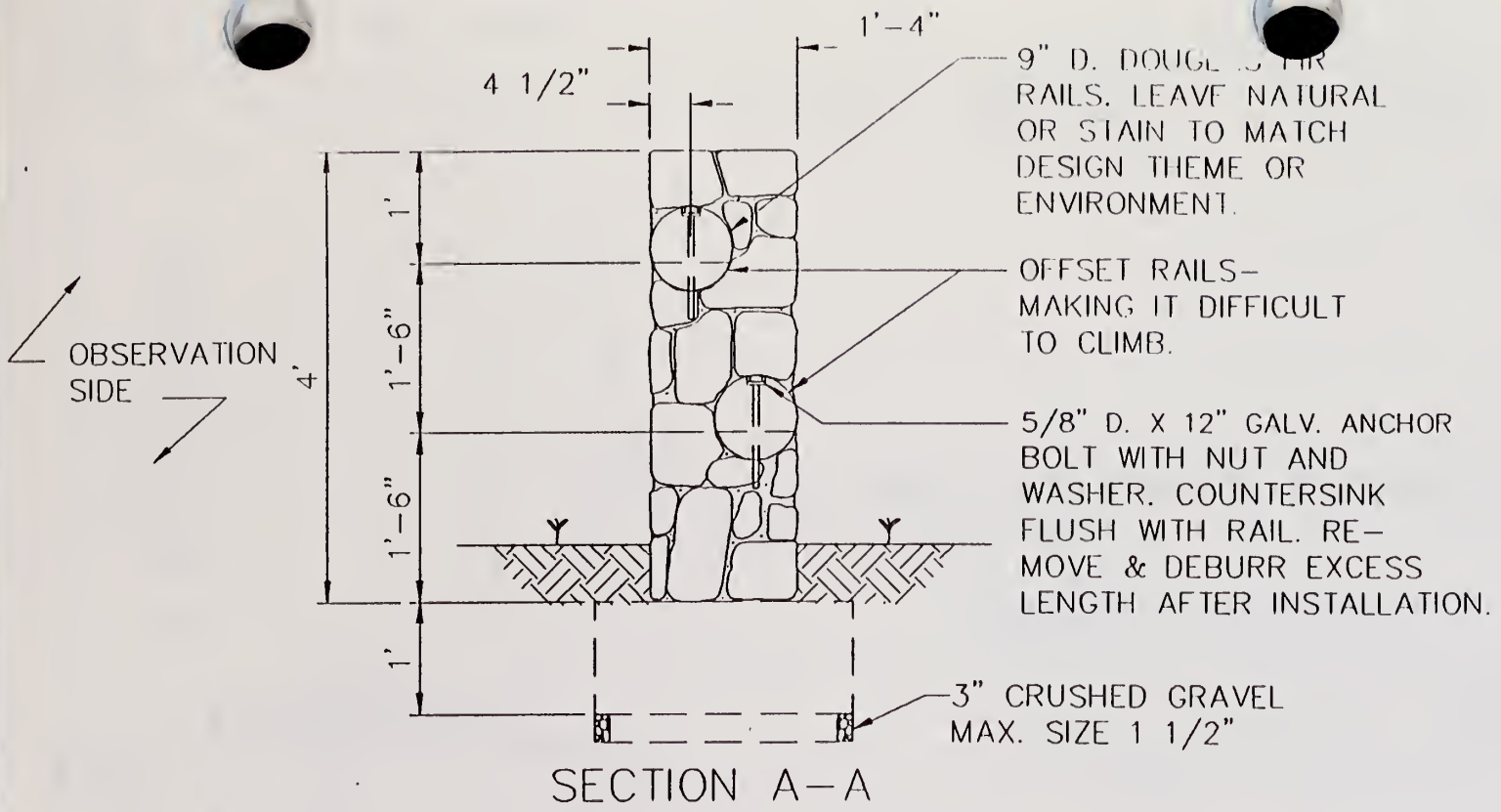
REC00003
11-14-88

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THE PACIFIC NORTHWEST REGION

DRAWN	DATE 11-14-88	
DESIGNED	DATE	
CHECKED	DATE	
REVIEWED	DATE	

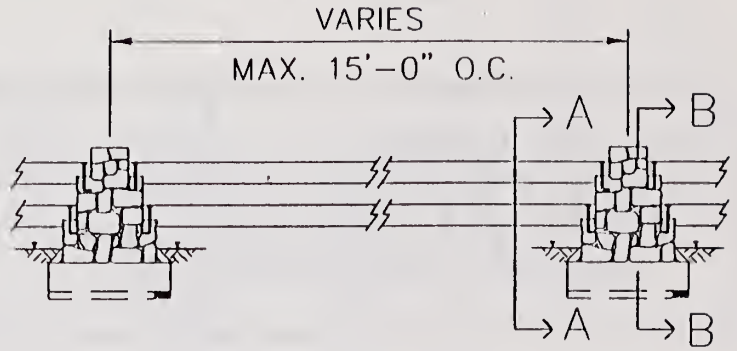
SIGNAGE # 1

REC 03 SHT. 1 OF 1



SECTION A-A

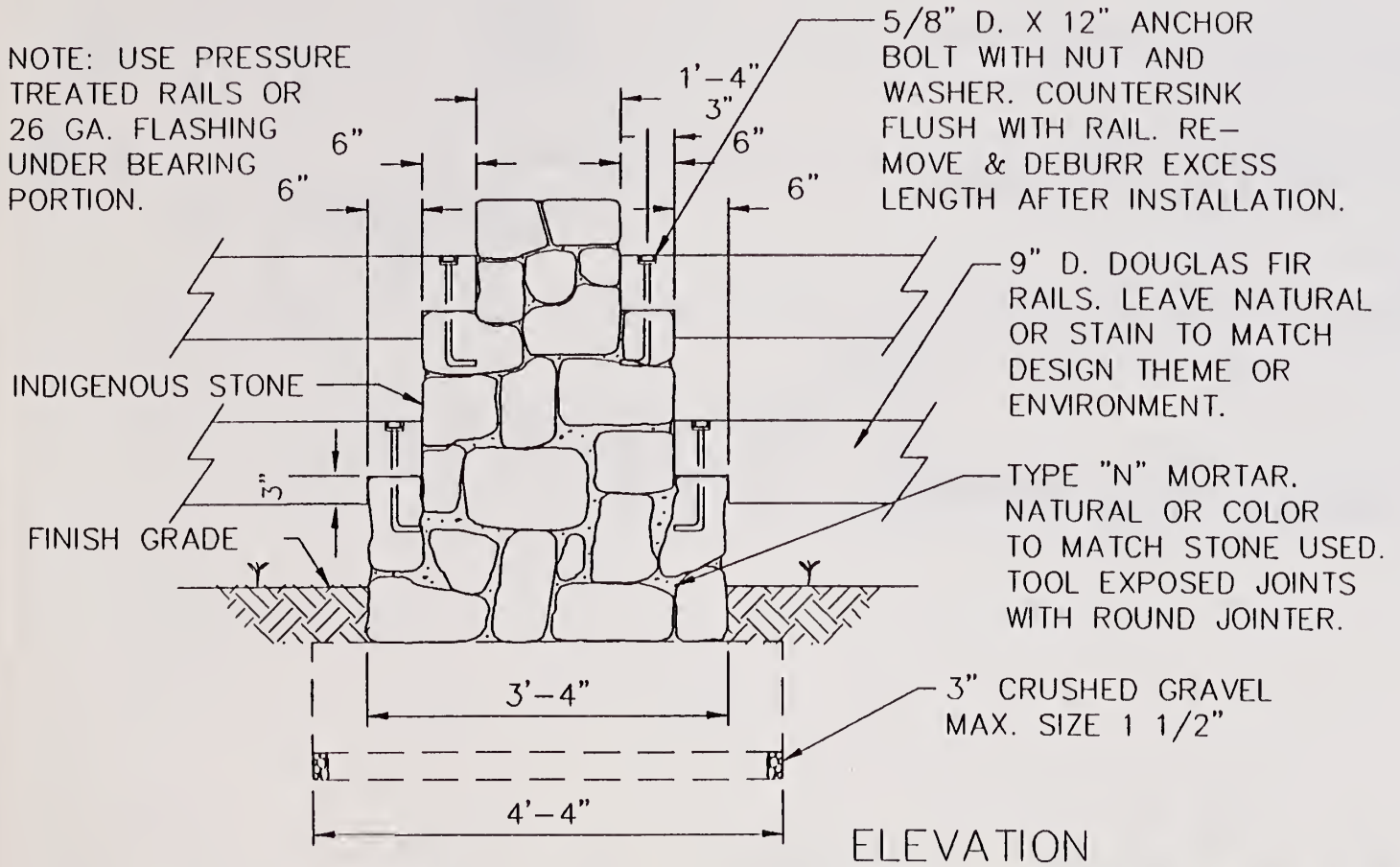
NOTE: SLOPE RAILS TO RESPOND TO SUR- ROUNDING GRADE.



ELEVATION 0'1'2'3'

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NOTE: USE PRESSURE TREATED RAILS OR 26 GA. FLASHING UNDER BEARING PORTION.

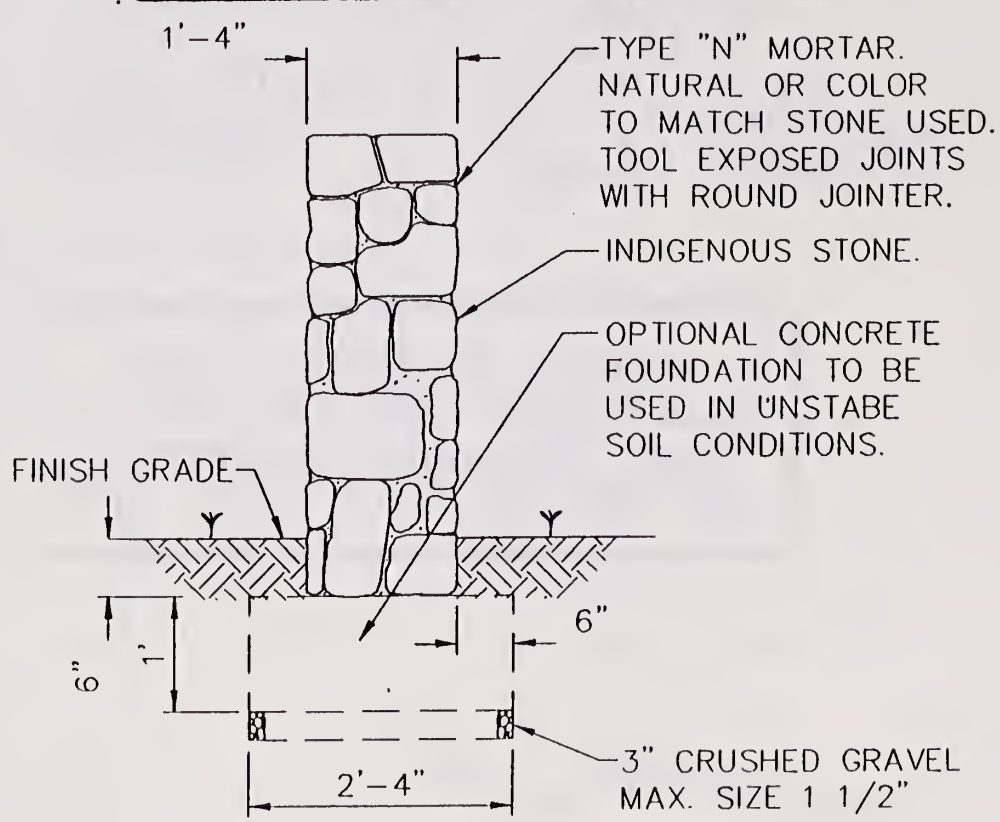


ELEVATION

0 1/2 1 2 3'

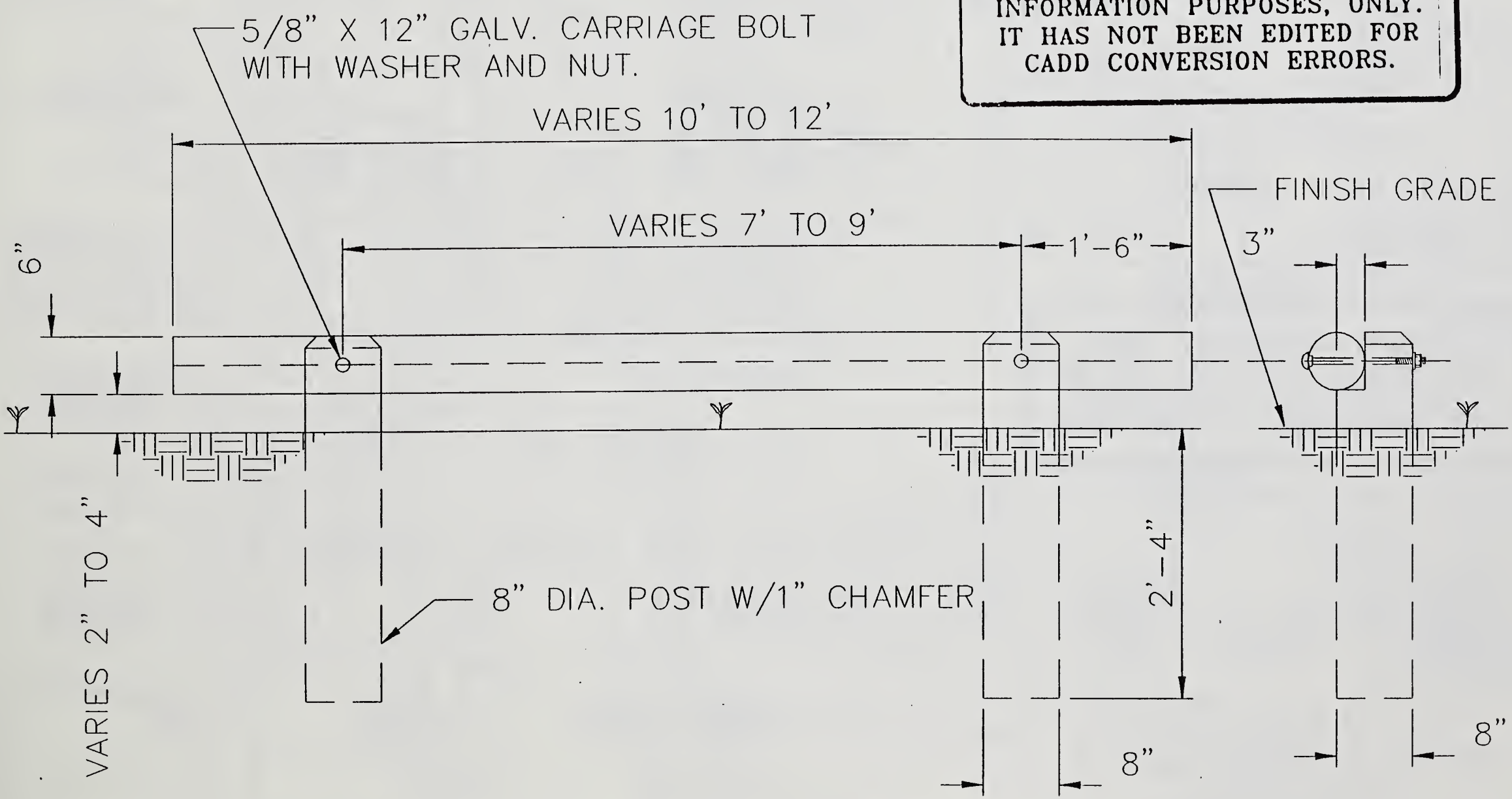
X/X ROCK AND POLE BARRIER

LDBF 6001 11-27-88



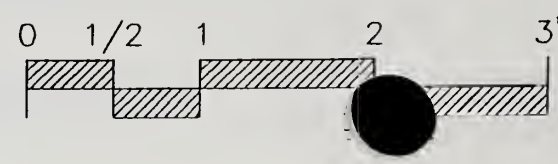
SECTION B-B

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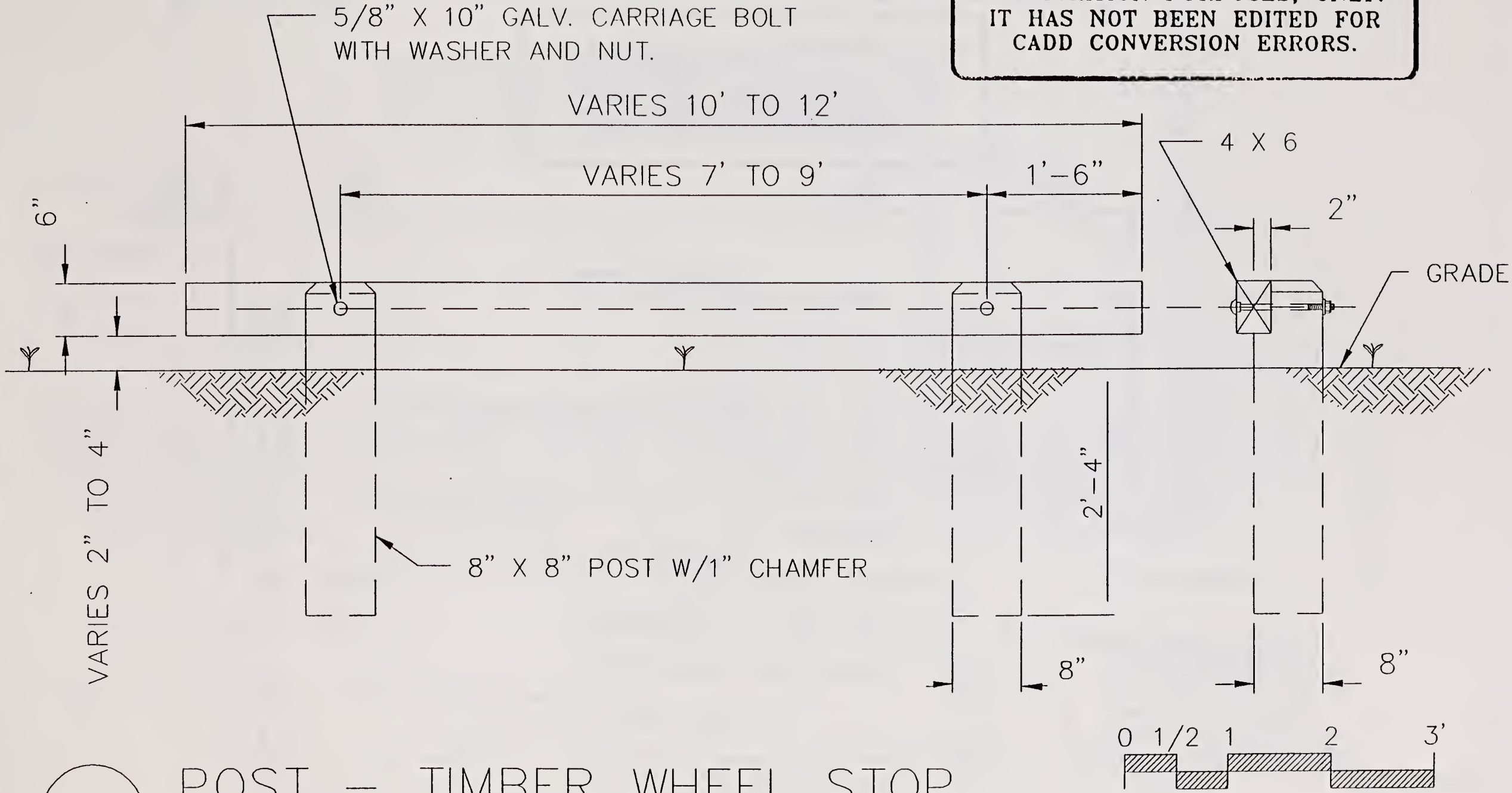


POST – LOG WHEEL STOP

LDBF 8004 11-27-88

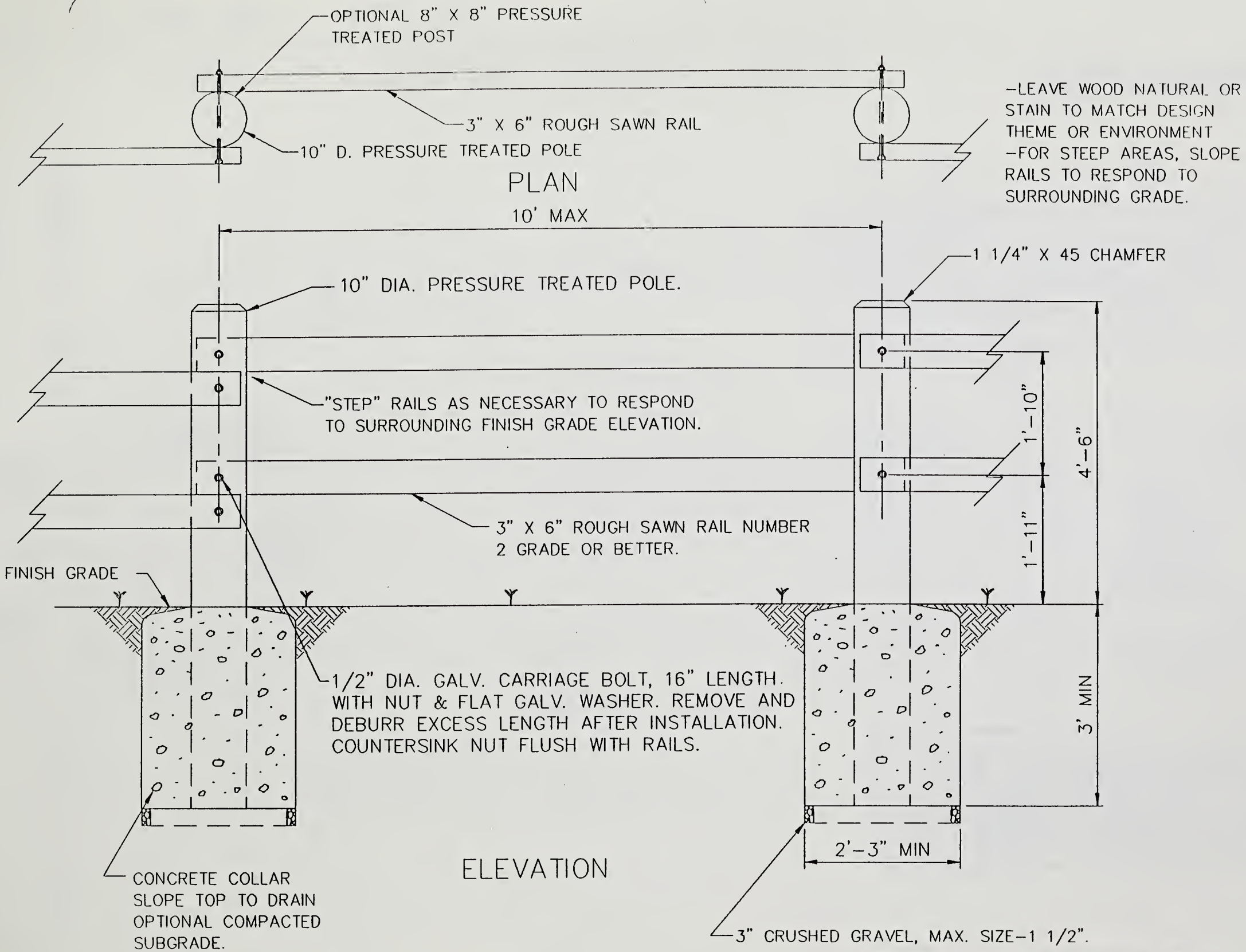


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POST - TIMBER WHEEL STOP

LDBF 8003 11-27-88



-LEAVE WOOD NATURAL OR STAIN TO MATCH DESIGN THEME OR ENVIRONMENT
-FOR STEEP AREAS, SLOPE RAILS TO RESPOND TO SURROUNDING GRADE.

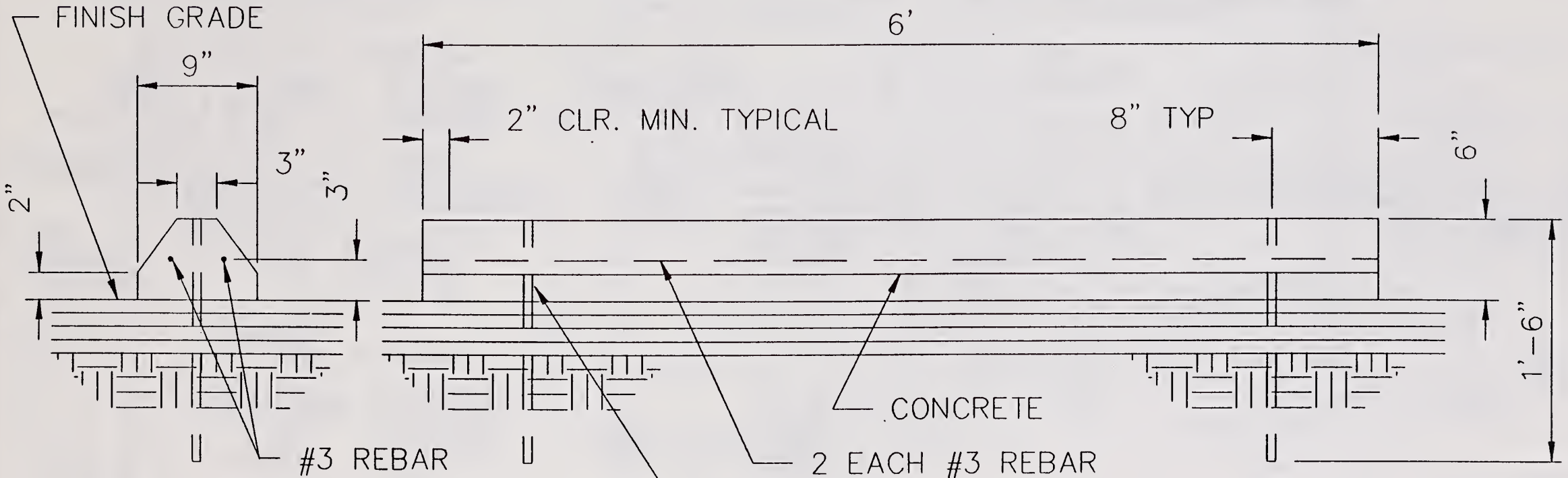
POLE AND RAIL FENCE

BF 6007 11-27-88

0 1/2 1 2 3'

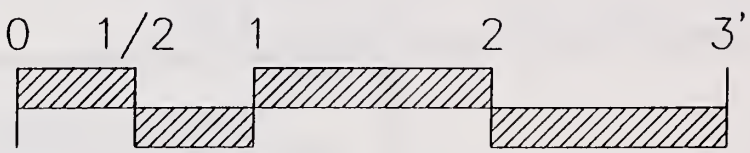
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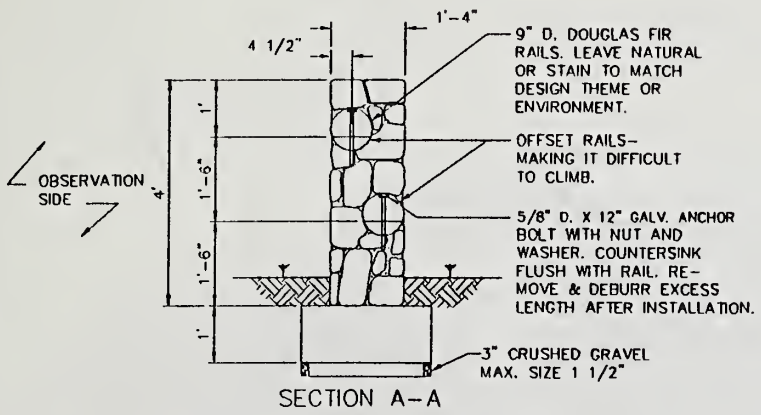


CONCRETE WHEEL STOP

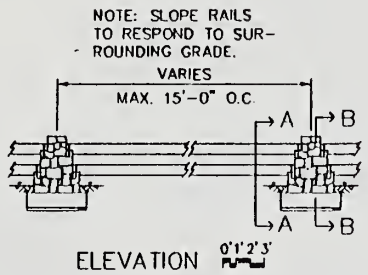
LDBF 6005 11-27-88



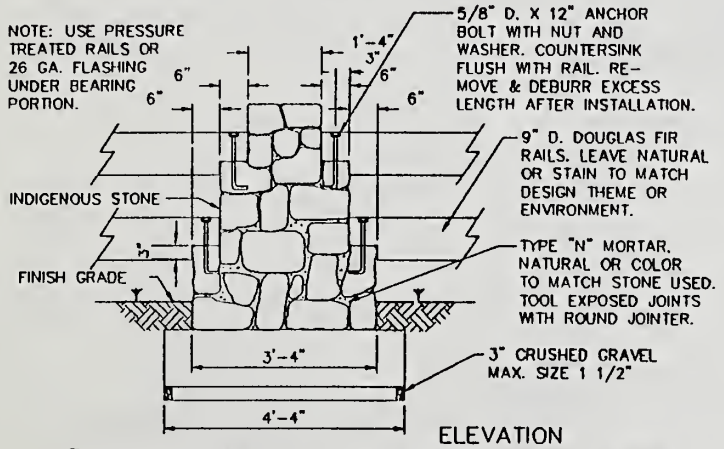
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SECTION A-A



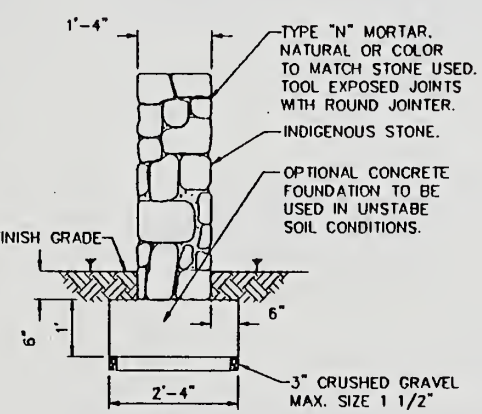
ELEVATION



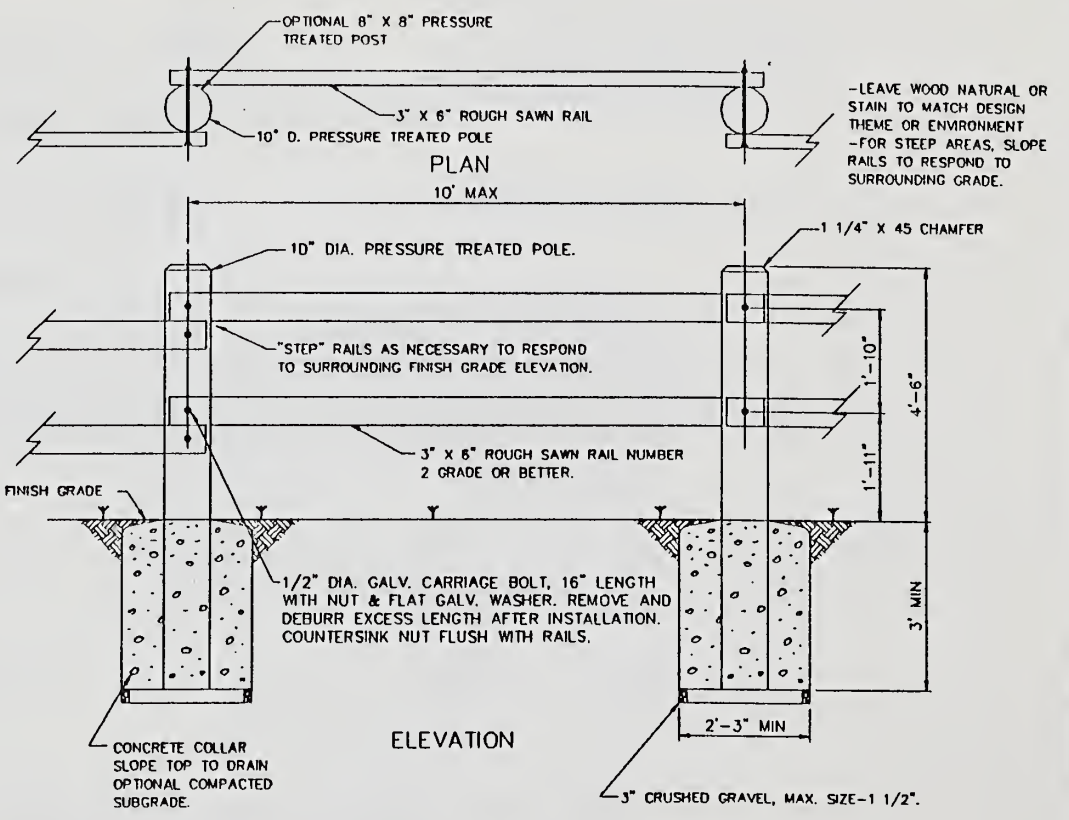
ELEVATION

X/X ROCK AND POLE BARRIER

LDBF 6001 11-27-88



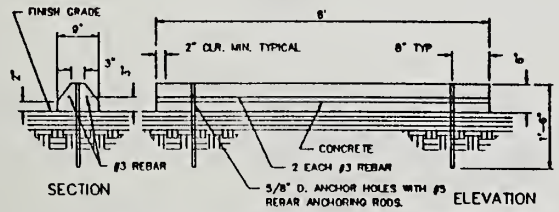
SECTION B-B



ELEVATION

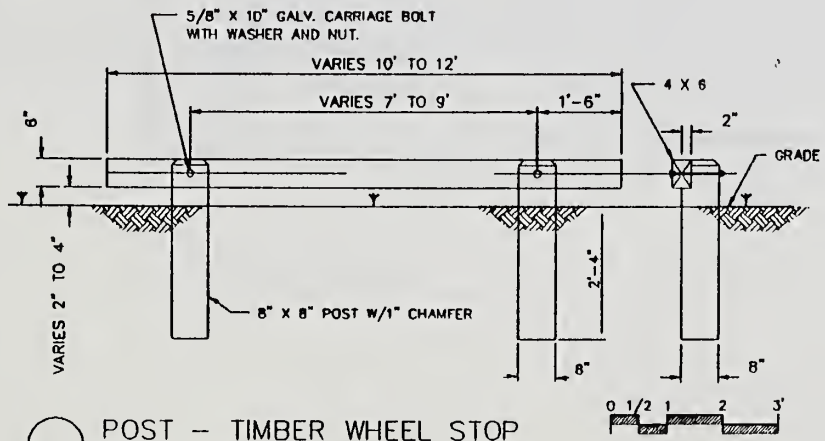
POLE AND RAIL FENCE

LDBF 6007 11-27-88



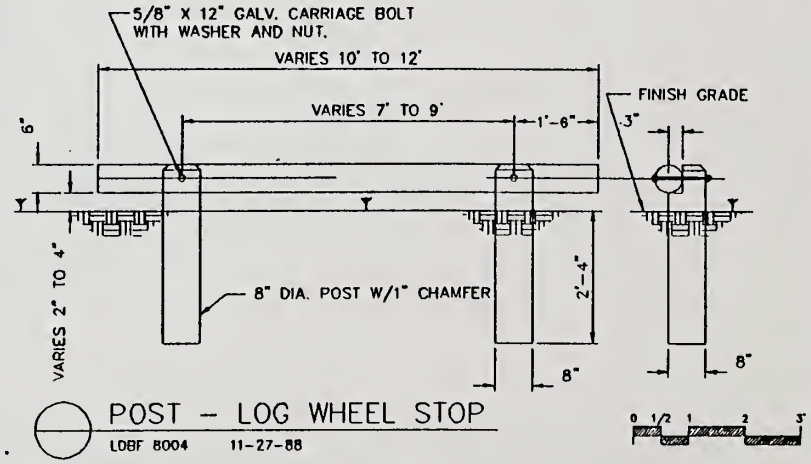
CONCRETE WHEEL STOP

LDBF 6005 11-27-88



POST - TIMBER WHEEL STOP

LDBF 8003 11-27-88



POST - LOG WHEEL STOP

LDBF 8004 11-27-88

ALL LDBF BLOCKS ON THIS SHEET WERE INSERTED AT 0.0625. AND THE OVERALL REC-DWG. WAS PLOTTED AT 1 TO 1.

REC00002
11-27-88

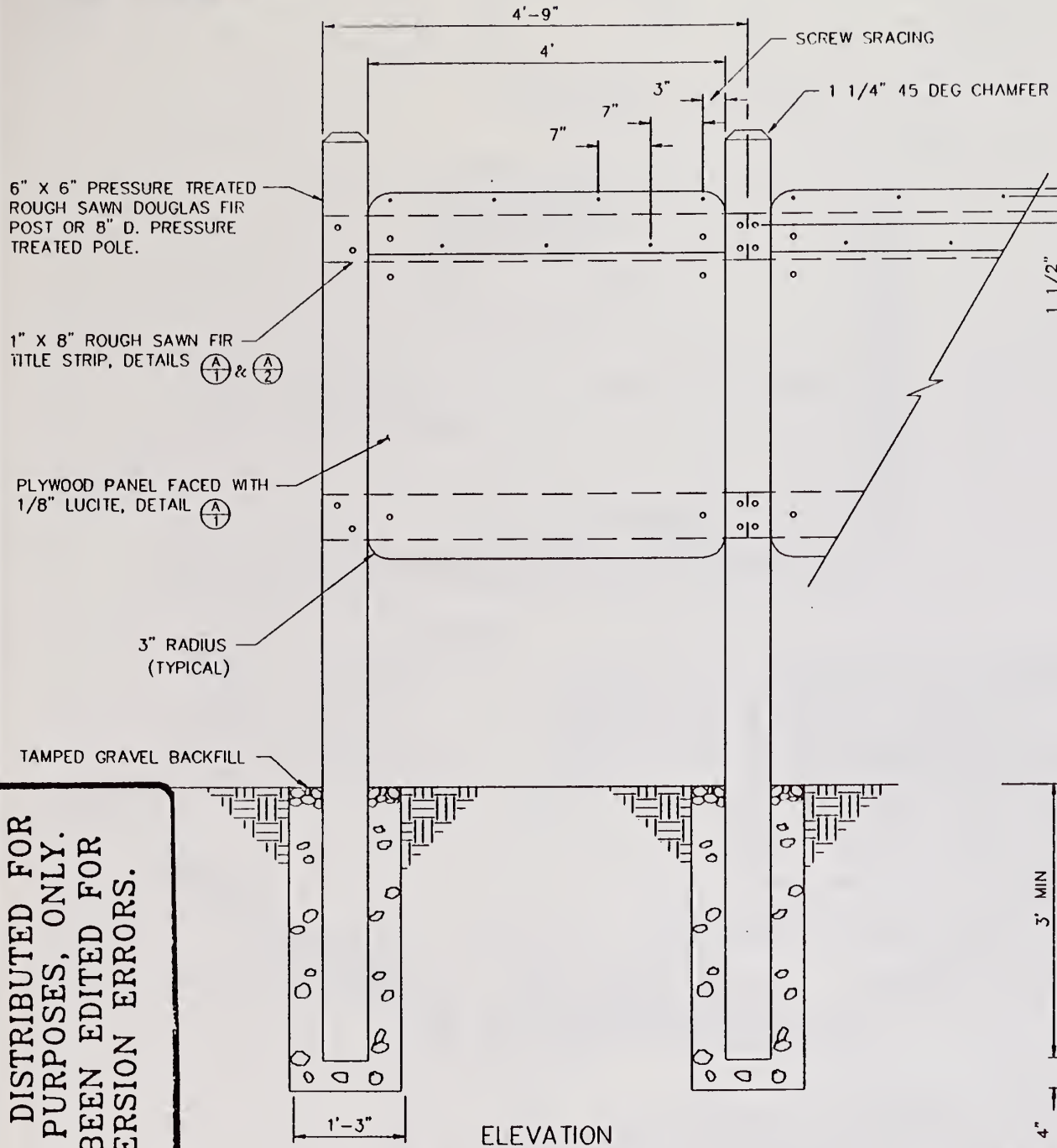
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

DRAWN DATE 11-27-88
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

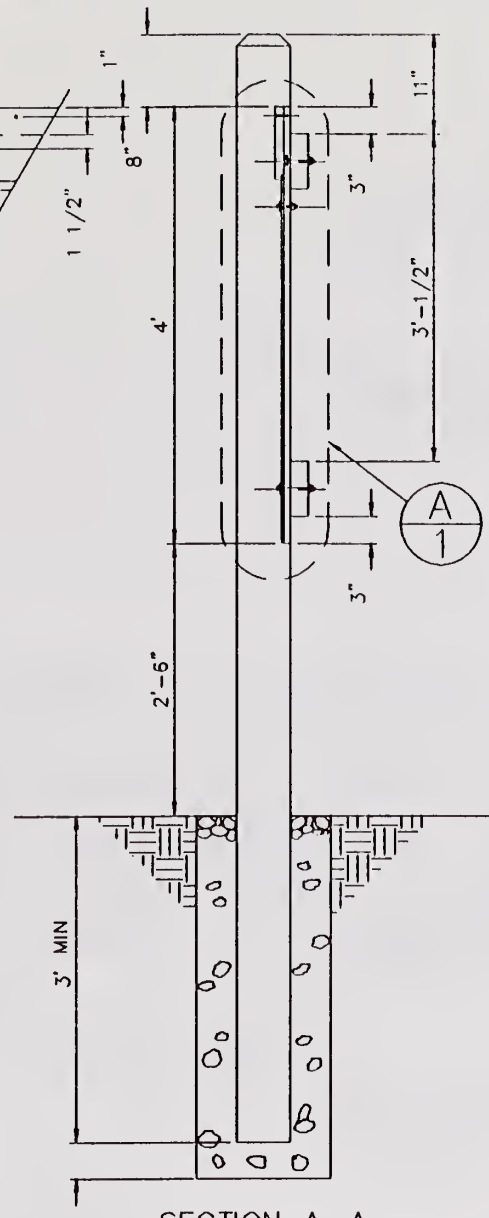
BARRIERS/FENCES

REC[illegible]2

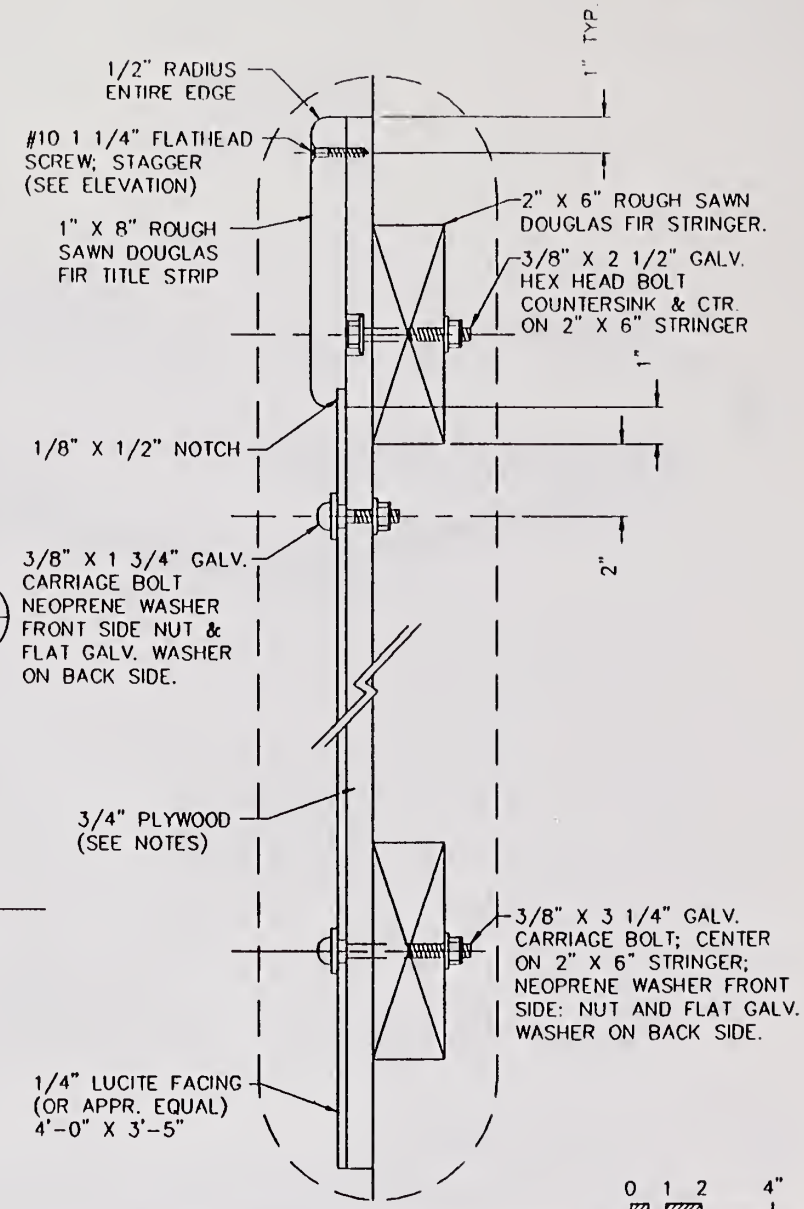
SHT. 1
OF 1



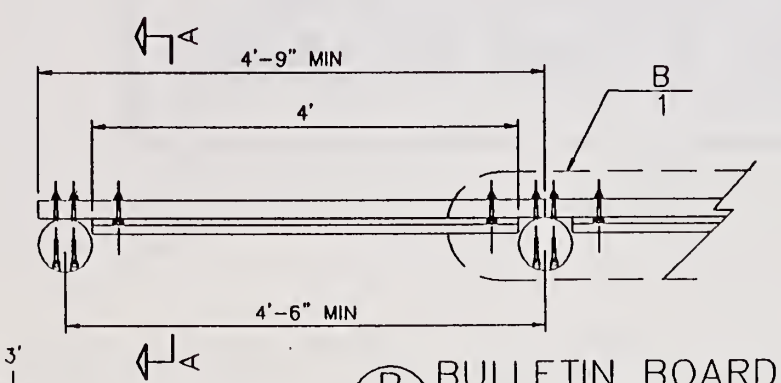
ELEVATION



SECTION A-A

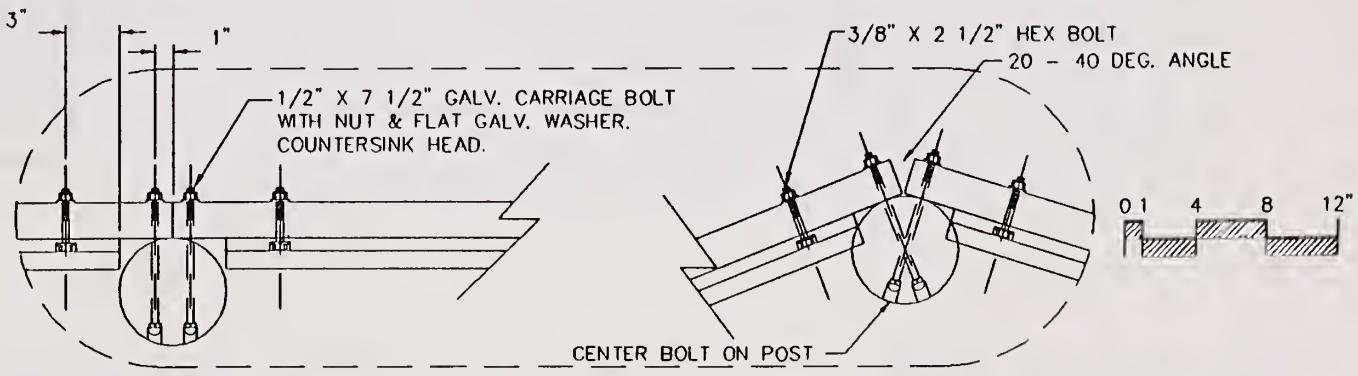


A/1 CONNECTION DETAIL
LDSI 6006 11-25-88



PLAN

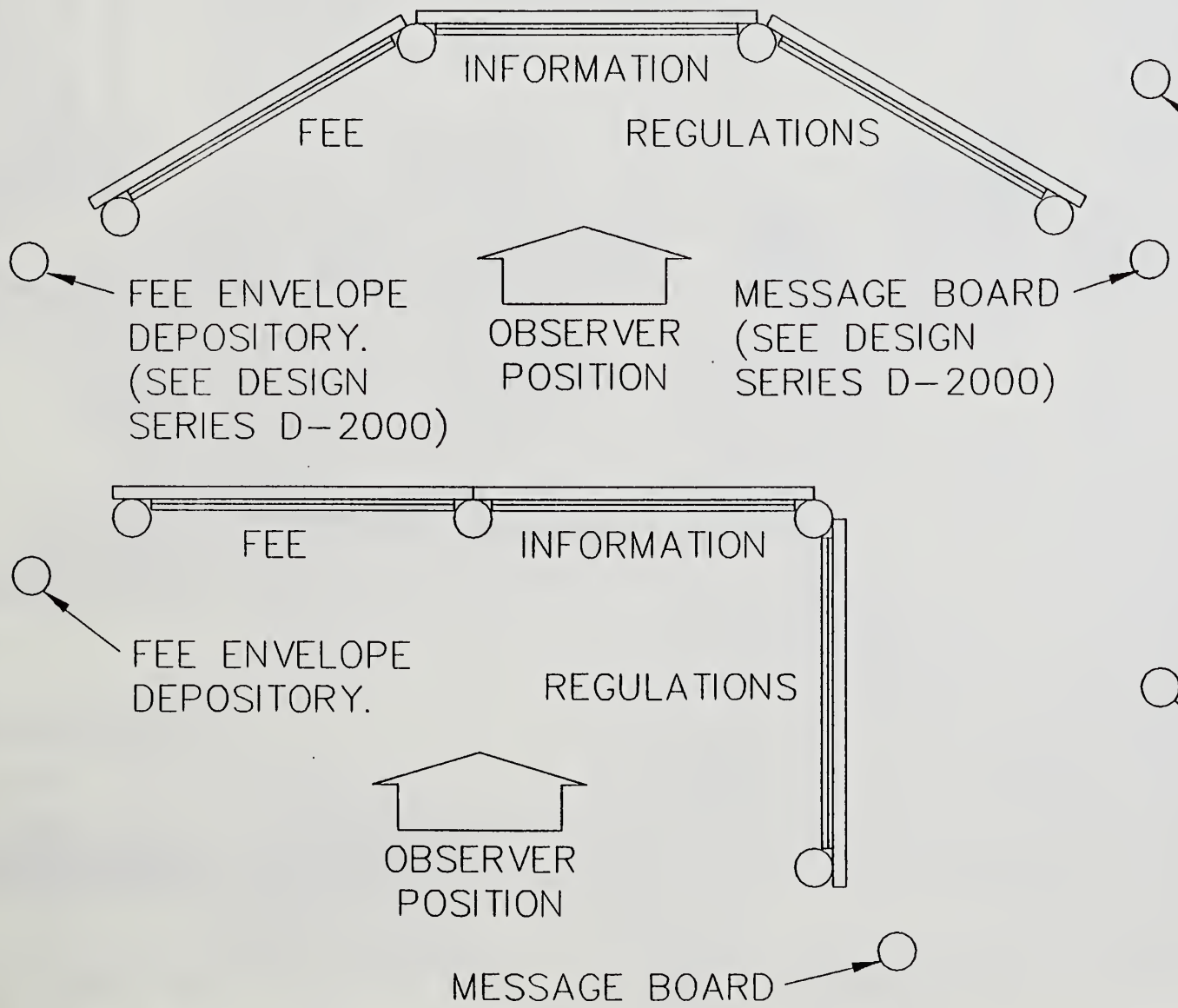
B/1 BULLETIN BOARDS
LDSI 6006 11-25-88

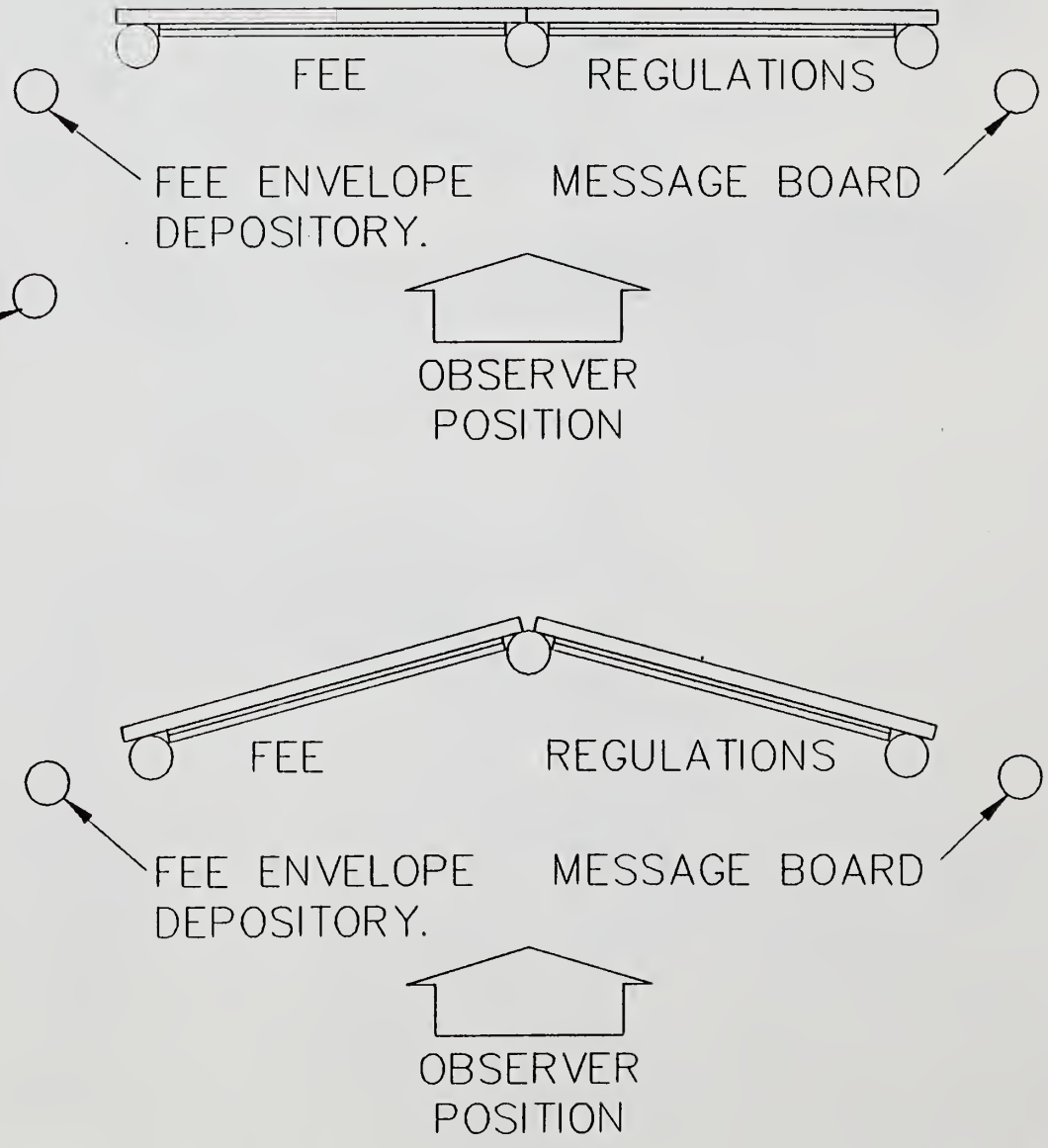


B/1 PANEL CONNECTION OPTIONS (SEE B/2)
LDSI 6006 11-25-88

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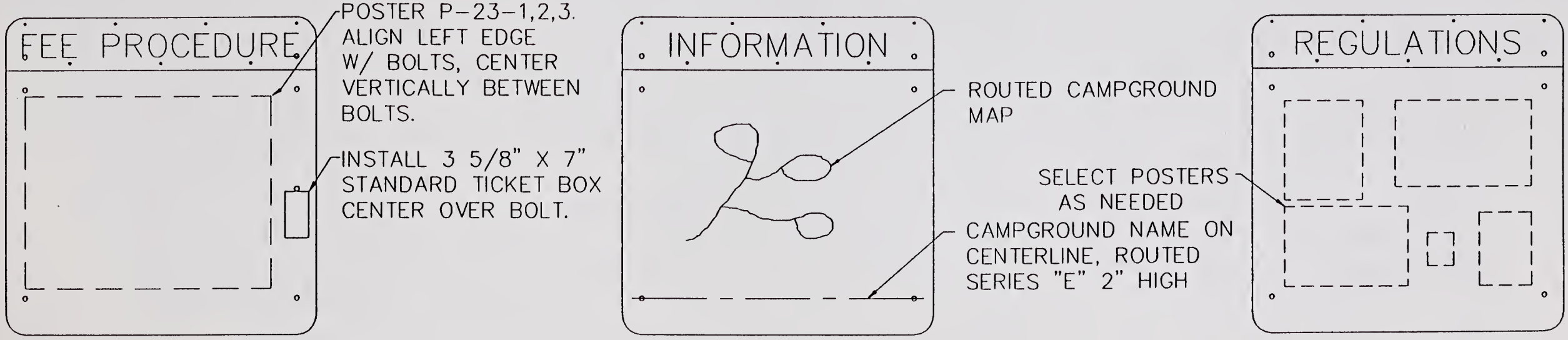
0 1' 2' 3'

B/2 2- & 3-PANEL BULLETIN BOARD OPTIONS

~~LDSI 6006~~ 11-25-88

B 2

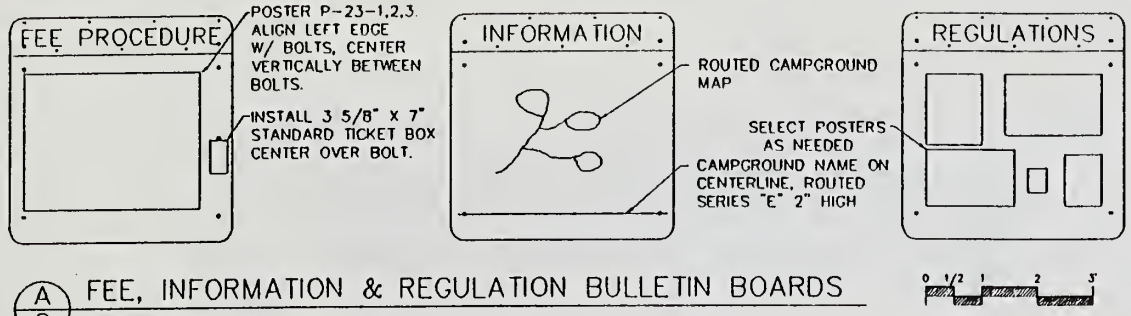
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A/2 FEE, INFORMATION & REGULATION BULLETIN BOARDS

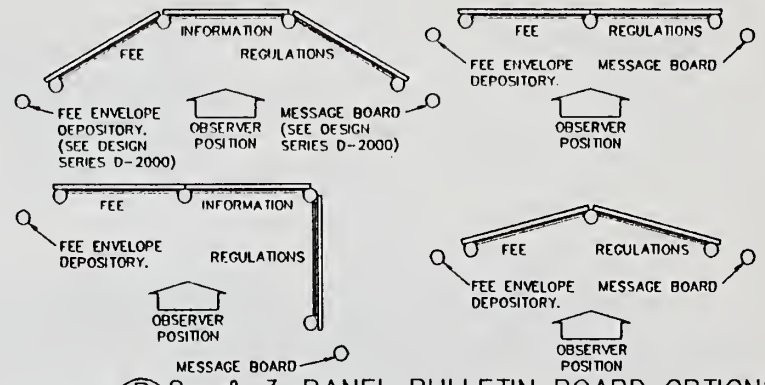


LDSI 6006 11-25-88



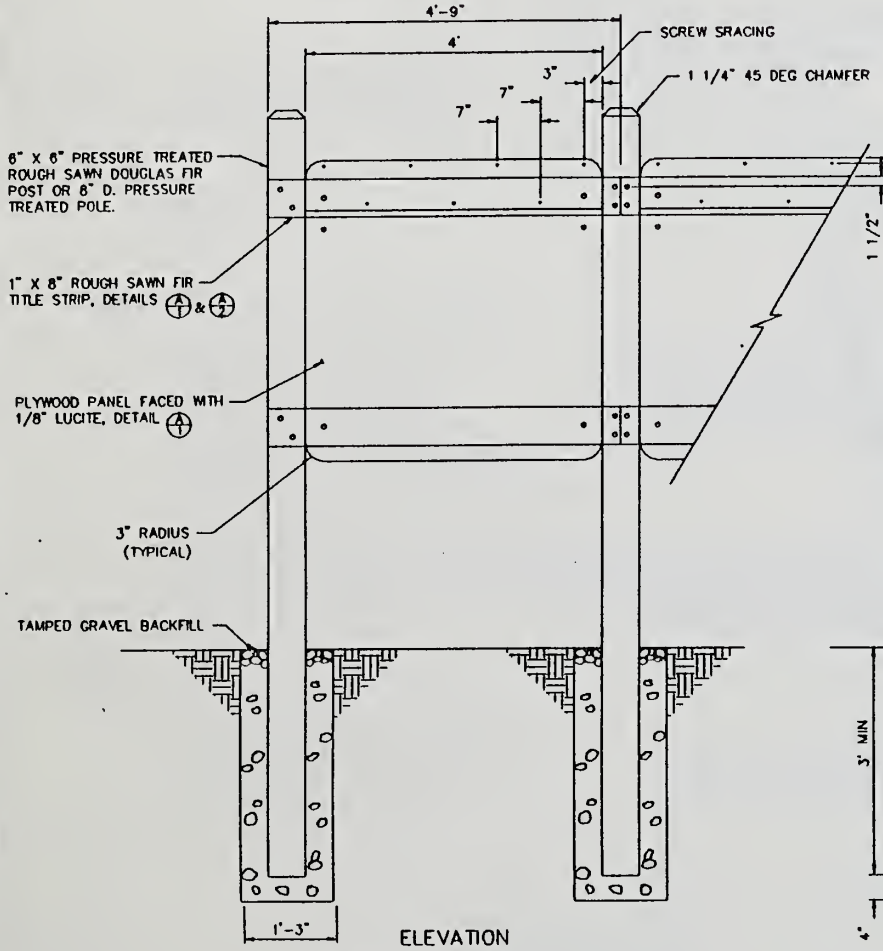
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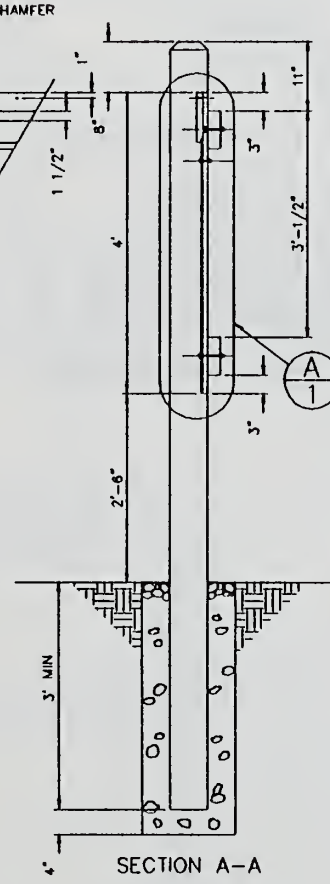
LDSI 6006 11-25-88

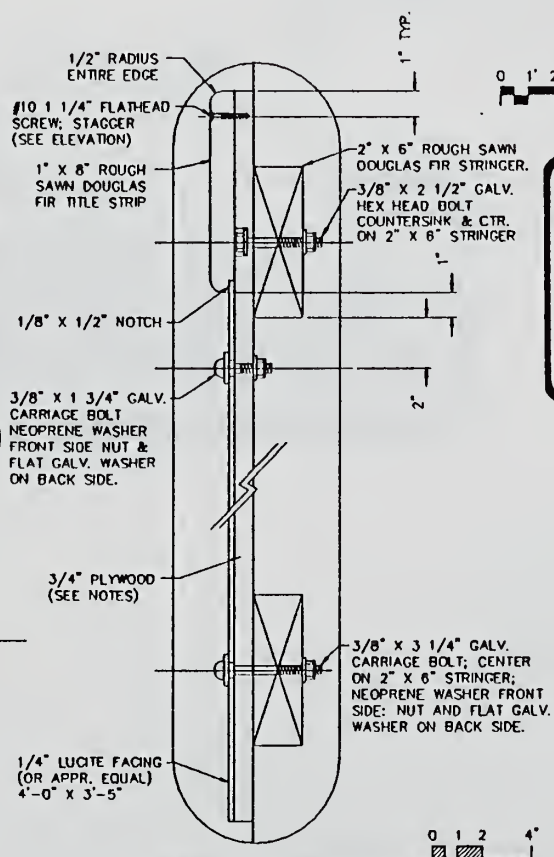


B/2 2- & 3-PANEL BULLETIN BOARD OPTIONS

LDSI 6006 11-25-88







A/1 CONNECTION DETAIL

LDSI 6006 11-25-88

0 1 2 4"

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NOTES

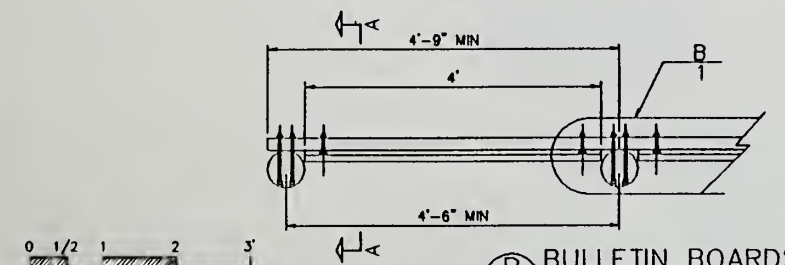
1. PANELS TO BE WESTERN RED CEDAR PLYWOOD POPE & TALBOT RUFF-CUT 44 OR EQUAL.
2. POSTS, TITLE STRIPS & STRINGERS TO BE ROUGH SAWN DOUGLAS FIR FREE OF LARGE KNOTS, WANES & CHECKS PRESSURE TREAT: STRINGERS & TITLE STRIPS TO HAVE PARALLEL GRAIN
3. PAINTING & STAINING

   LETTERING FOR TITLE STRIP TO BE LIGHT OLIVE
   MAP & CAMPGROUND NAME TO BE UMBER

   PLYWOOD --"OLYMPIC" SEMI-TRANSPARENT STAIN #719 •

   POSTS. TITLE STRIPS & STRINGERS --"OLYMPIC" SOLID COLOR "COFFEE" STAIN •

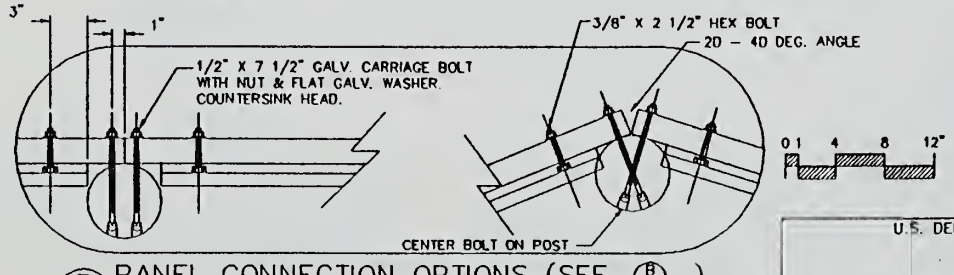
   • OR APPROVED EQUAL



PLAN

B/1 BULLETIN BOARDS

LDSI 6006 11-25-88



B/1 PANEL CONNECTION OPTIONS (SEE B/2)

LDSI 6006 11-25-88

DWG.	INS. FACTOR
LDSI 6006	.0833
B2	.03125
A2	.0625
RECO0001 WAS PLOTTED AT 1 TO 1	

BULLETIN BOARD RECO0001 11-25-88

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

DRAWN	DATE	11-25-88
DESIGNED	DATE	
CHECKED	DATE	
REVIEWED	DATE	

BULLETIN BOARDS

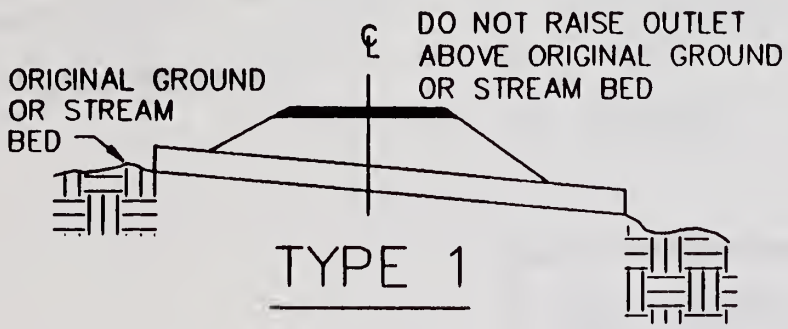
RECO 0001

SHT. 1 OF 1

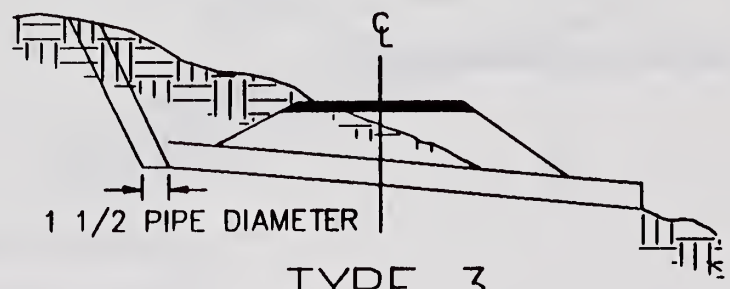
DRAINAGE CONSTRUCTION DETAILS

SHEET	TOTAL SHEETS

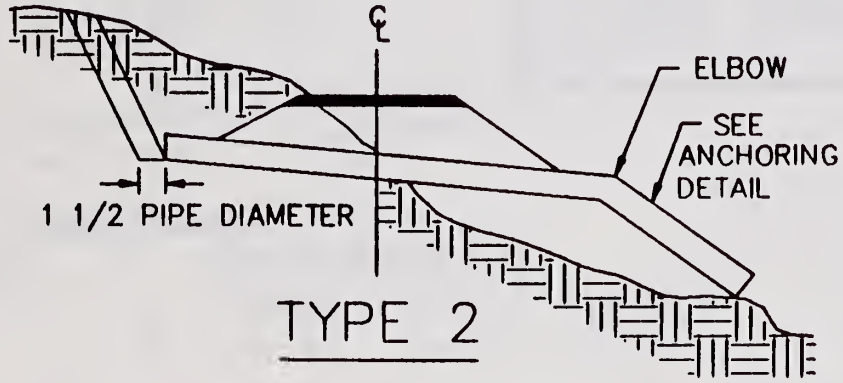
9-9-88
REV. 10-19-88
REV. 10-22-88



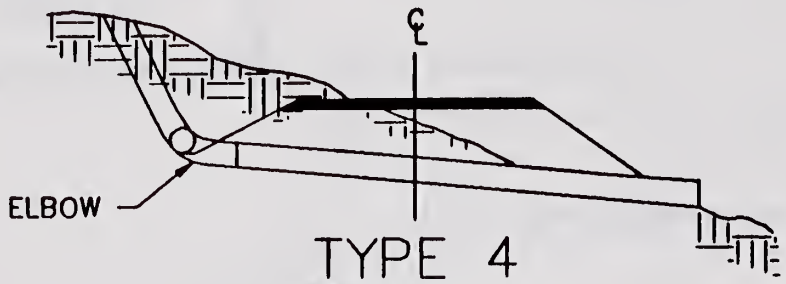
TYPE 1



TYPE 3



TYPE 2



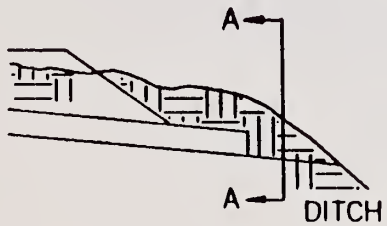
TYPE 4

NOTE: MINIMUM COVER OVER CULVERT AT SHOULDER SHALL BE 12 INCHES BELOW SUBGRADE

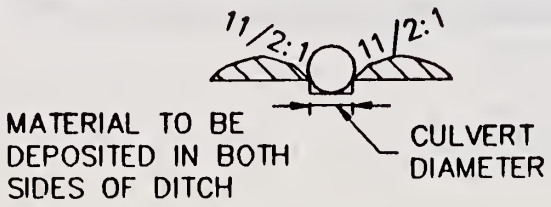
HD000008 8/31/88

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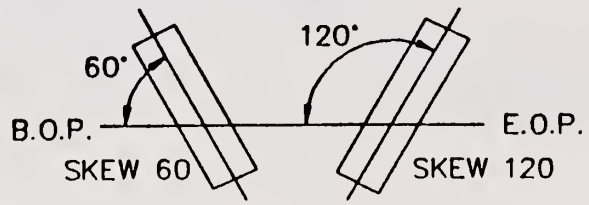
OUTLET DITCH



SECTION A-A



SKEW DIAMETER



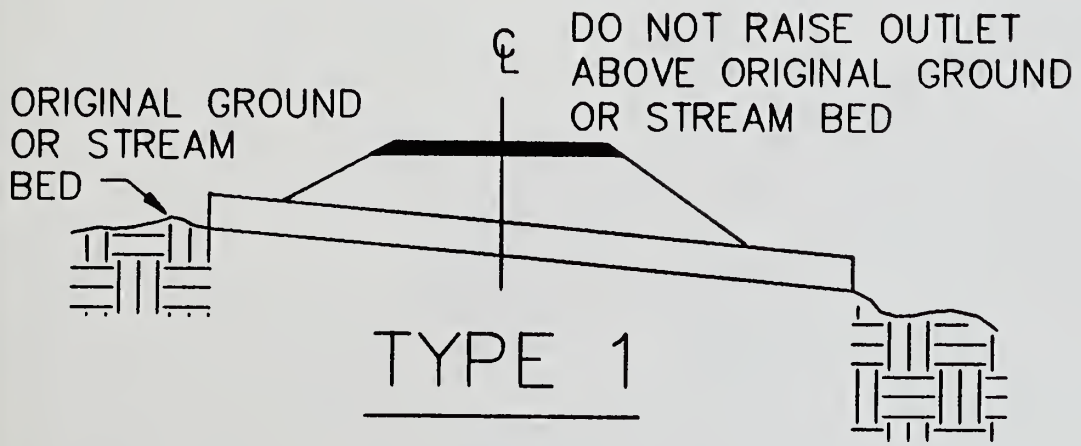
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HD000009 8/31/88

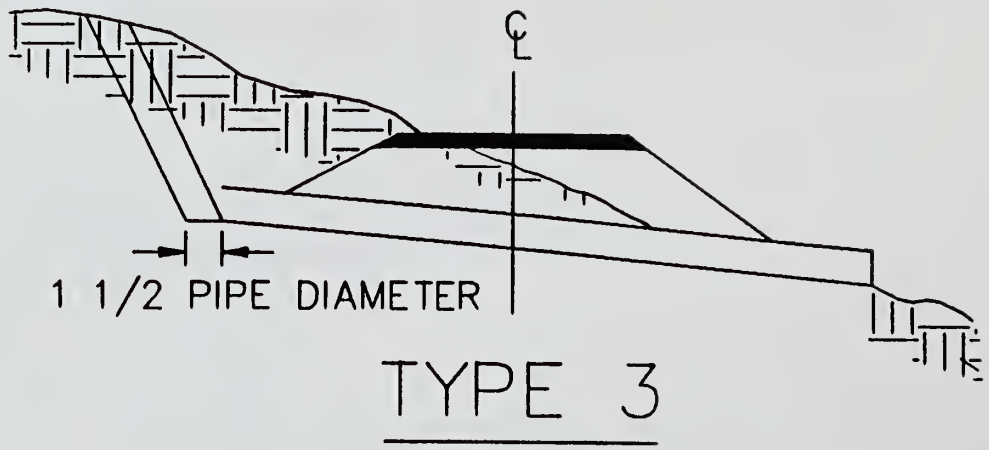
HD000010 8/31/88

S.F. = 1 TO 1

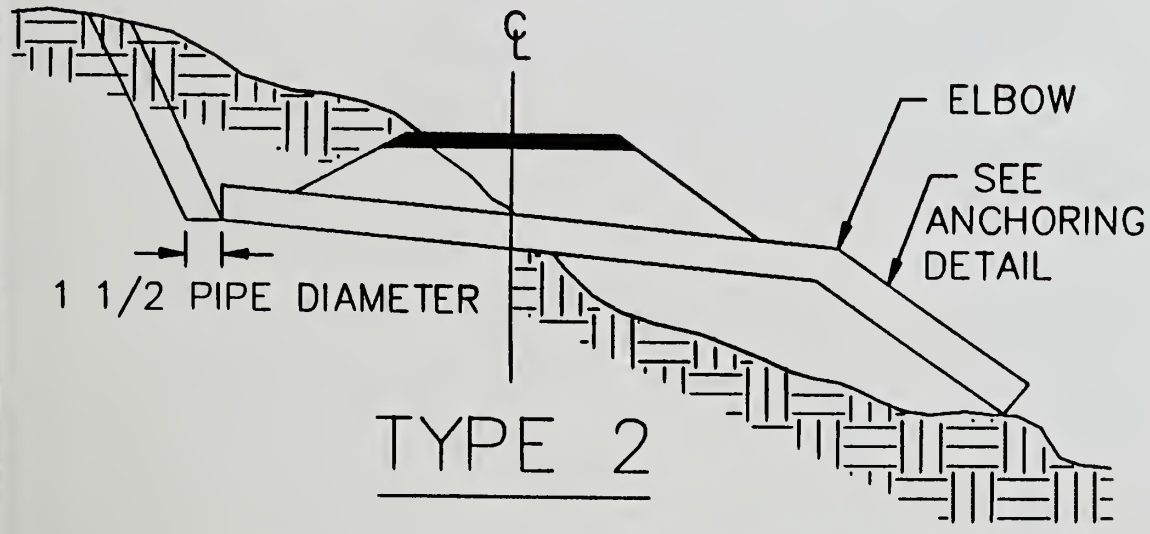
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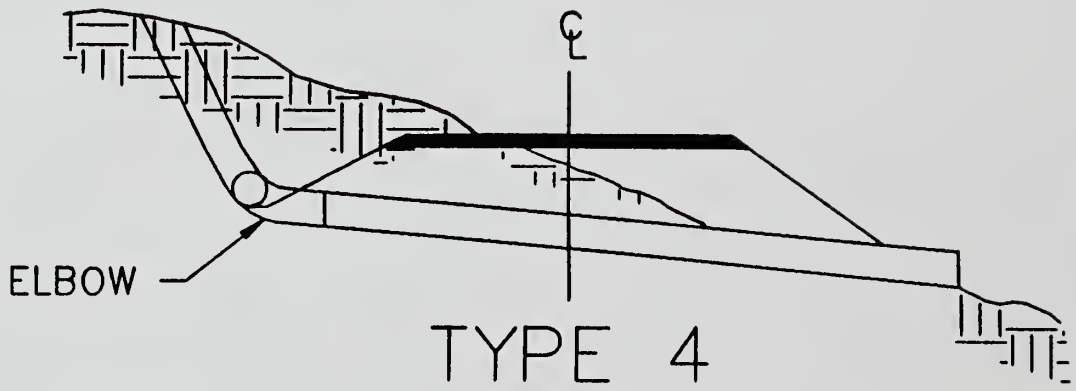
TYPE 1



TYPE 3



TYPE 2



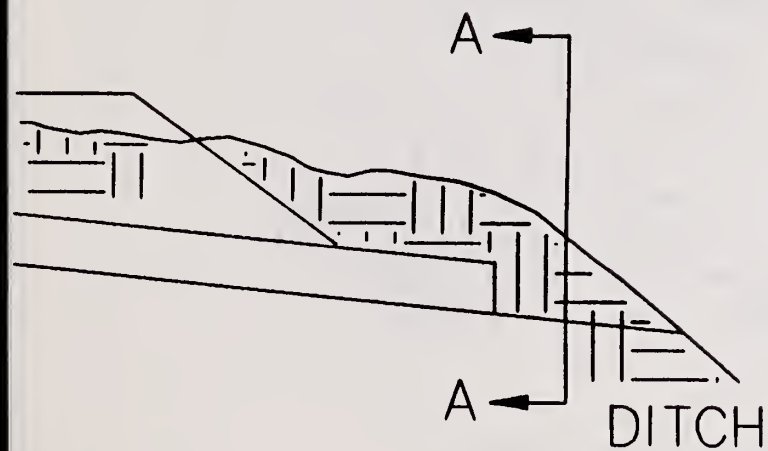
TYPE 4

NOTE: MINIMUM COVER OVER CULVERT AT SHOULDER SHALL BE 12 INCHES BELOW SUBGRADE

HD000008 1/88

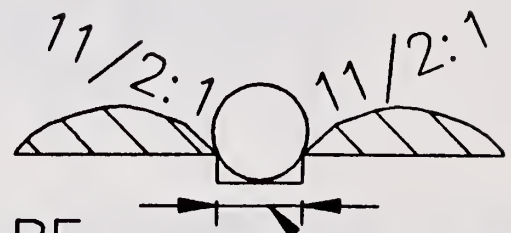
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OUTLET DITCH



DITCH GRADE =

SECTION A–A

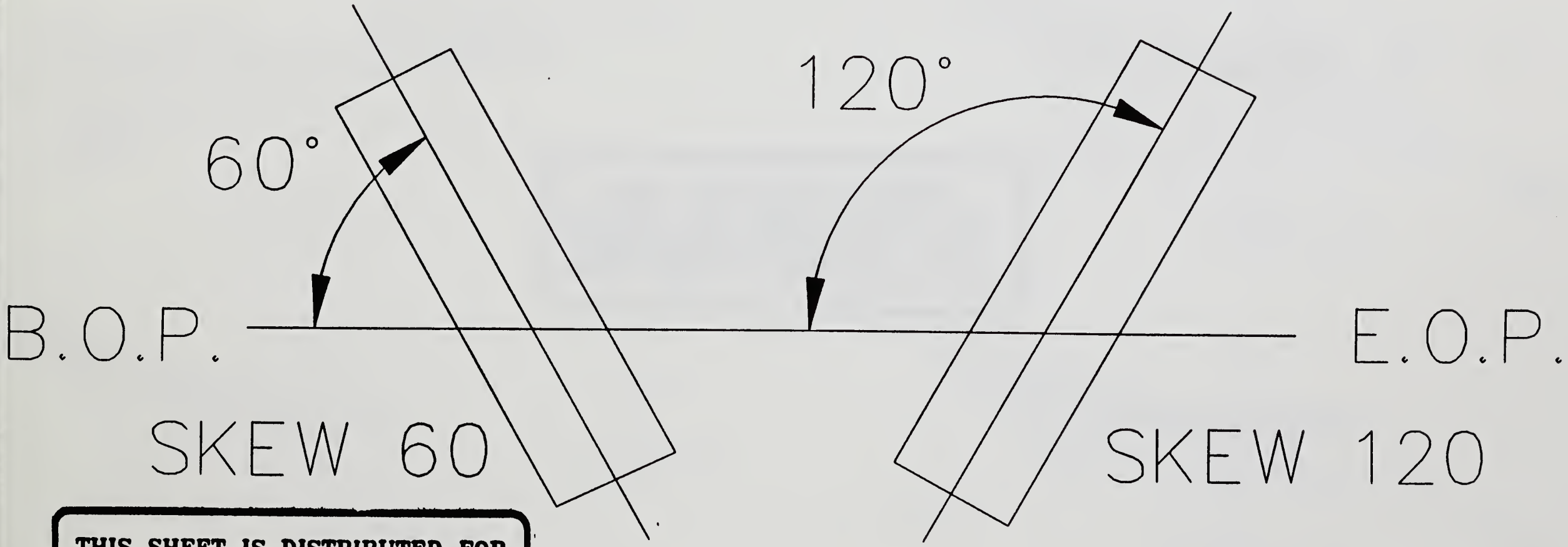


MATERIAL TO BE DEPOSITED IN BOTH SIDES OF DITCH

CULVERT DIAMETER

HD000009 8/31/88

SKEW DIAGRAM



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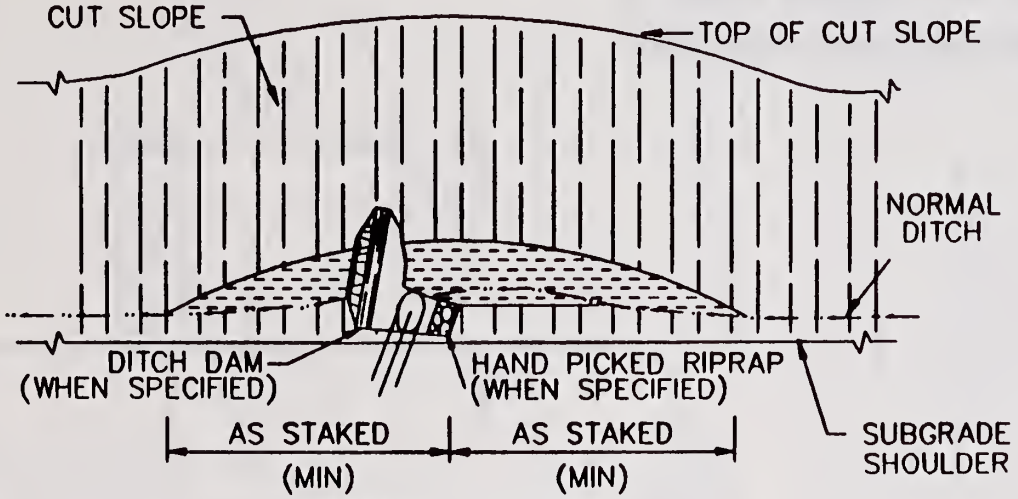
SHEET	TOTAL SHEETS
1	1

DRAINAGE CONSTRUCTION DETAILS

H0000027

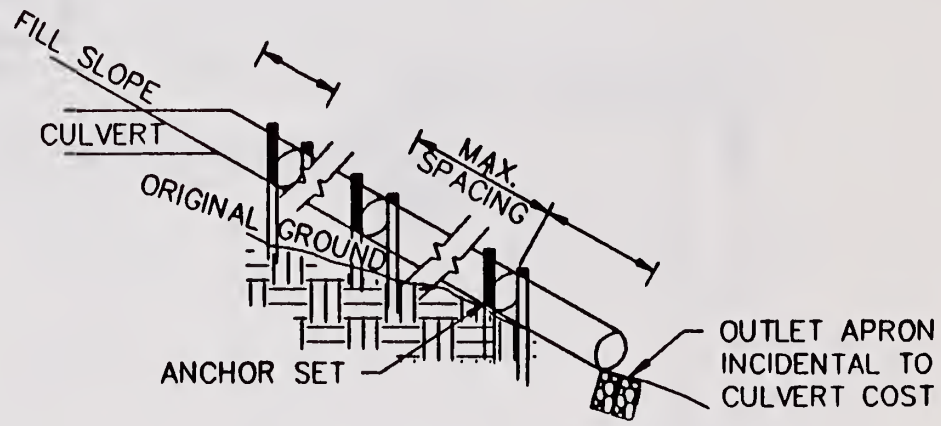
9-31-88
REV. 10-19-88
REV. 10-22-88

CATCH BASIN DETAIL
AND
TYPE 2,3 CULVERT INSTALLATION

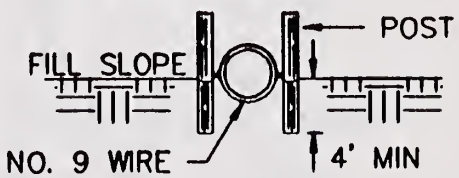


HD000012 8/31/88

ANCHOR DETAILS



FASTER WIRE TO POST



NOTE:

36" DIAMETER AND LARGER DOWNPIPE SHALL BE HALF BURIED. ANCHOR SETS SHALL CONSIST OF TWO 6' METAL FENCE POST AND 3 STRANDS OF NO. 9 WIRE.
THE 3 STRANDS OF WIRE SHALL BE TWISTED TOGETHER AND ENCOMPASS THE ENTIRE CIRCUMFERENCE OF THE PIPE AND BOTH ANCHORS. ANCHOR ASSEMBLY FOR DOWNPIPE SHALL BE THE SAME BASE METAL AS THE DOWNPIPE.

HD000013 8/31/88

OUTLET APRON DETAIL

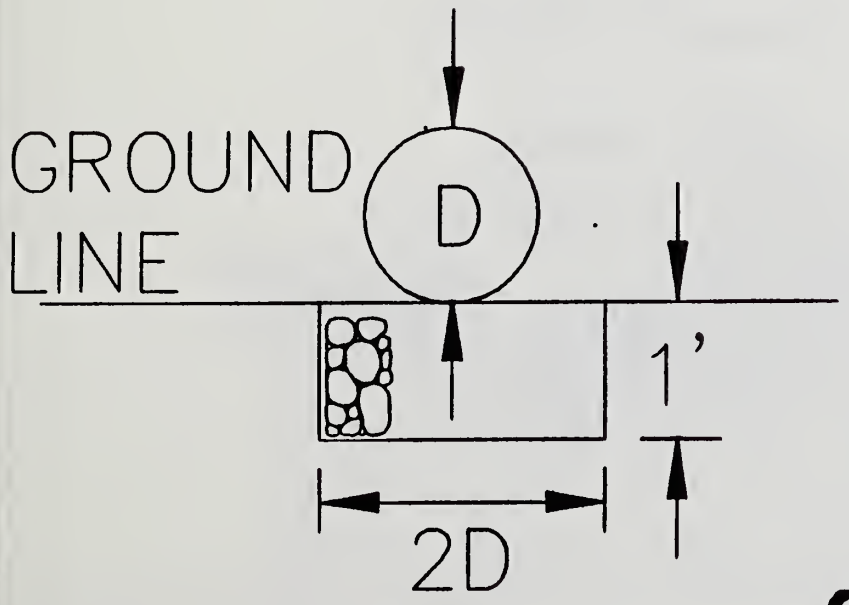


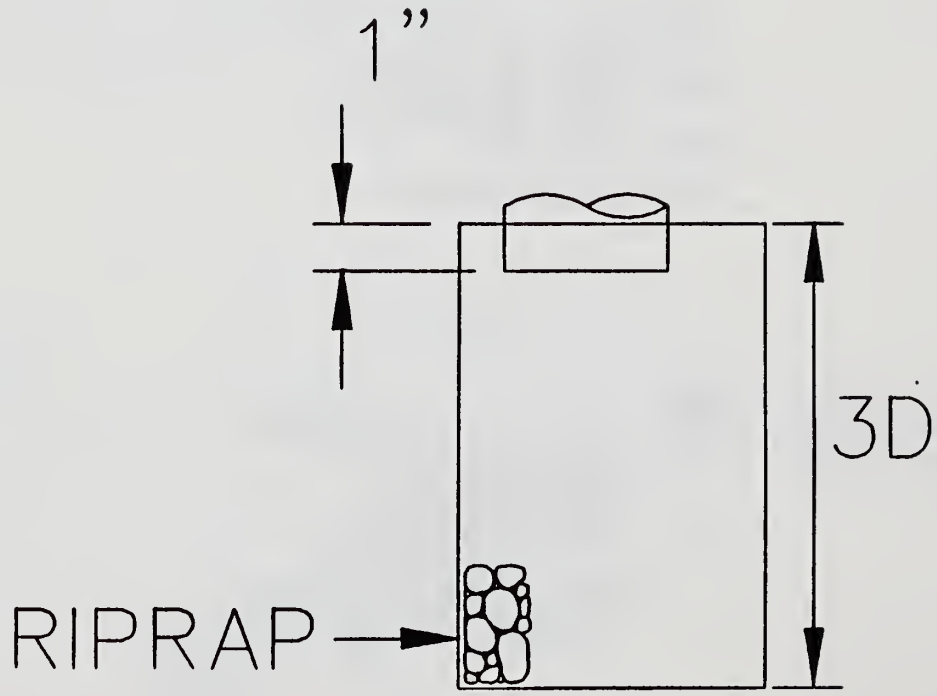
APRON SURFACE SHALL BE LEFT WITH PROTRUDING RIPRAP FOR VELOCITY BREAK.

HD000011 8/31/88

S.F. = 1 TO 1

OUTLET APRON DETAIL





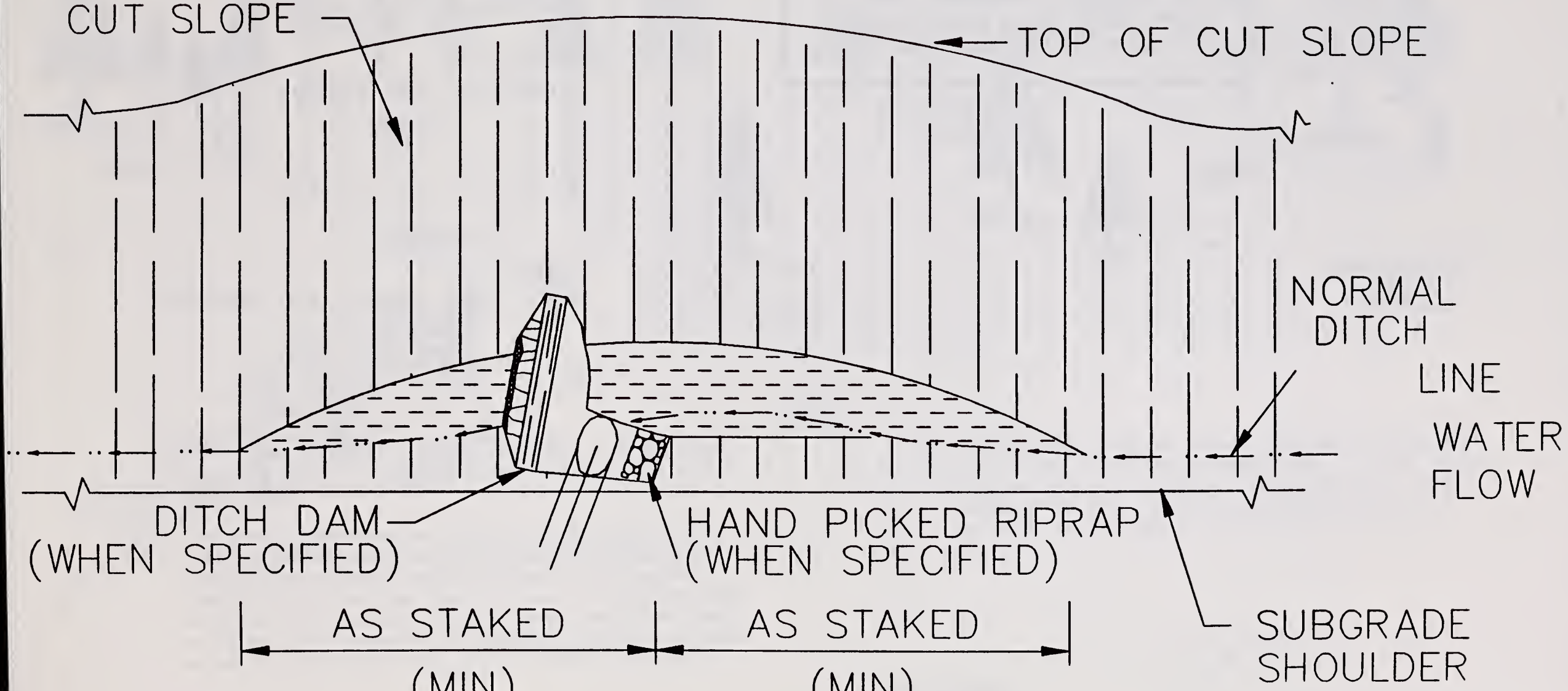
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APRON SURFACE SHALL BE LEFT WITH PROTRUDING RIPRAP FOR VELOCITY BREAK.

HD000011 8/31/88

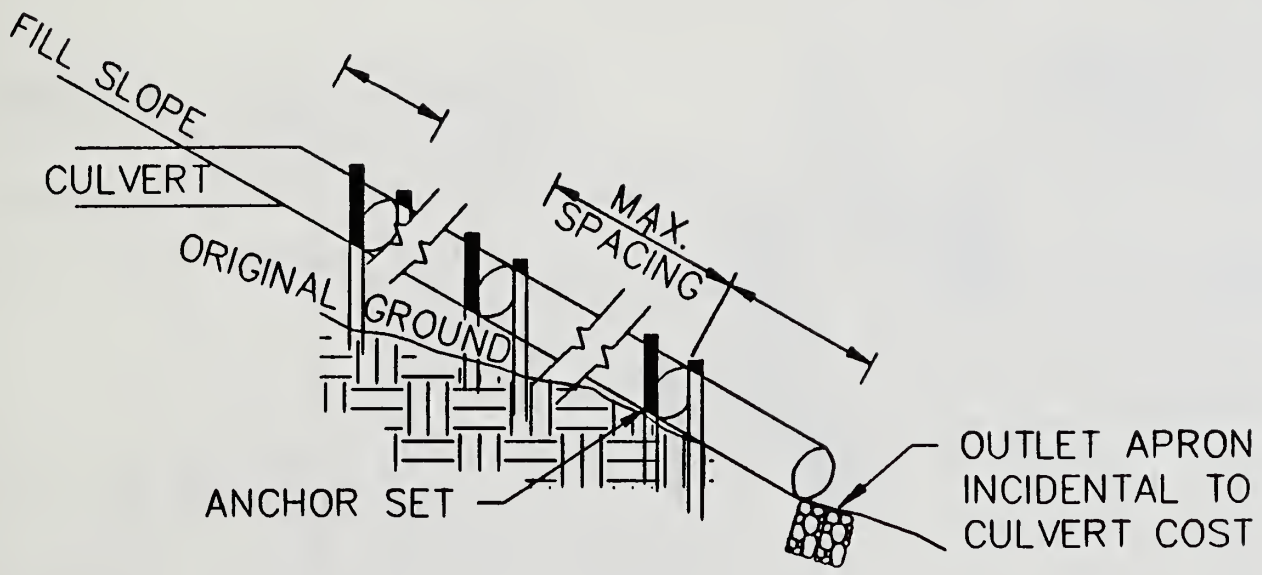
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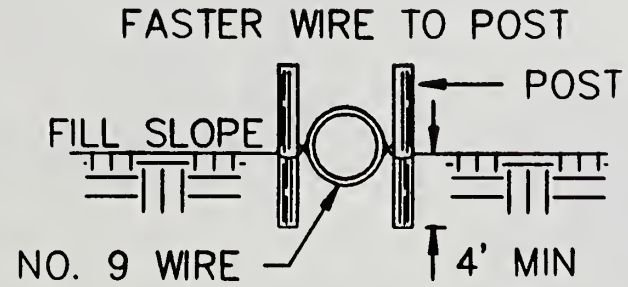
CATCH BASIN DETAIL
AND
TYPE 2,3 CULVERT INSTALLATION



HD000012 8/31/88

ANCHOR DETAILS





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NOTE:

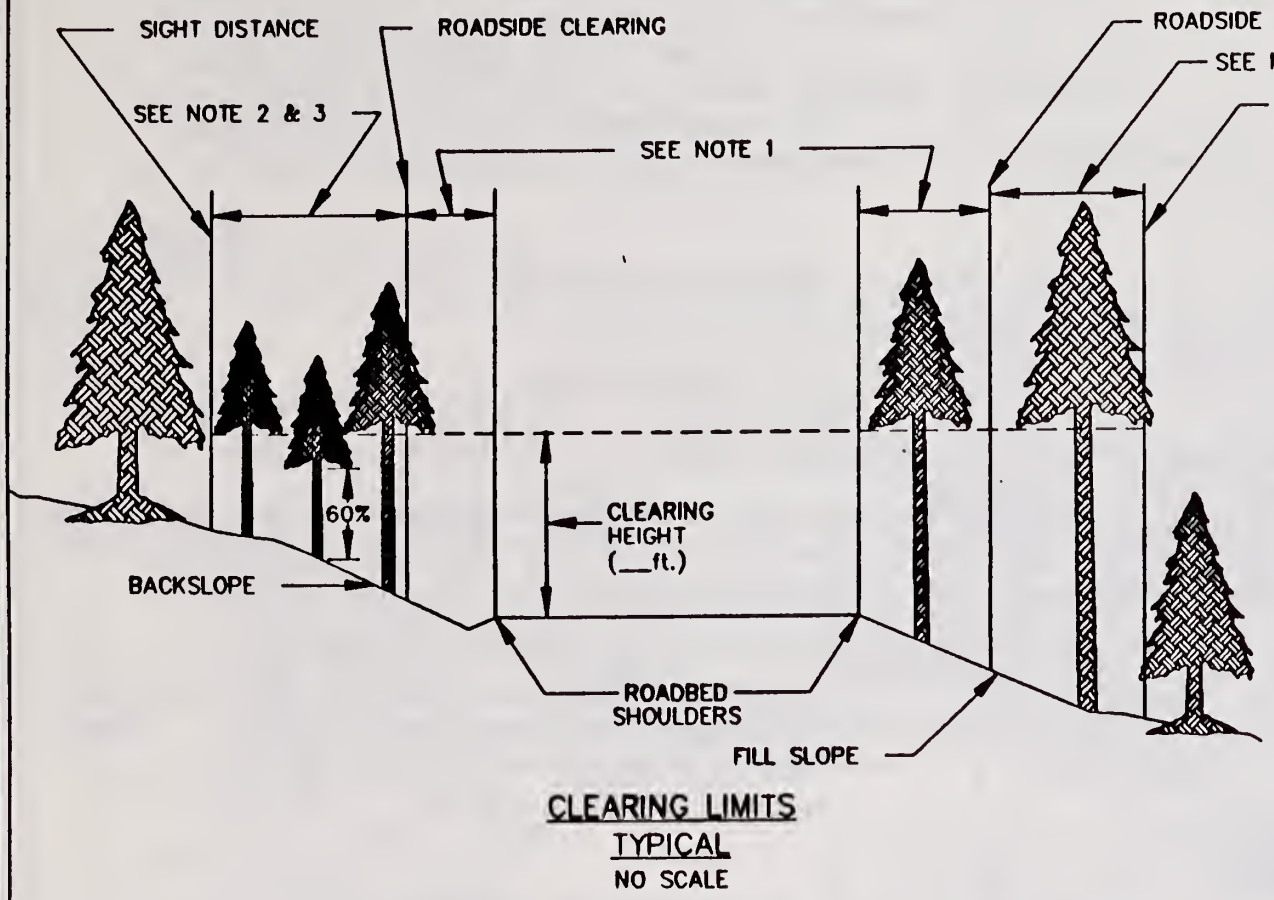
36" DIAMETER AND LARGER DOWNPIPE SHALL BE HALF BURIED. ANCHOR SETS SHALL CONSIST OF TWO 6' METAL FENCE POST AND 3 STRANDS OF NO. 9 WIRE.
THE 3 STRANDS OF WIRE SHALL BE TWISTED TOGETHER AND ENCOMPASS THE ENTIRE CIRCUMFERENCE OF THE PIPE AND BOTH ANCHORS. ANCHOR ASSEMBLY FOR DOWNPIPE SHALL BE THE SAME BASE METAL AS THE DOWNPIPE.

HD000013 8/31/88

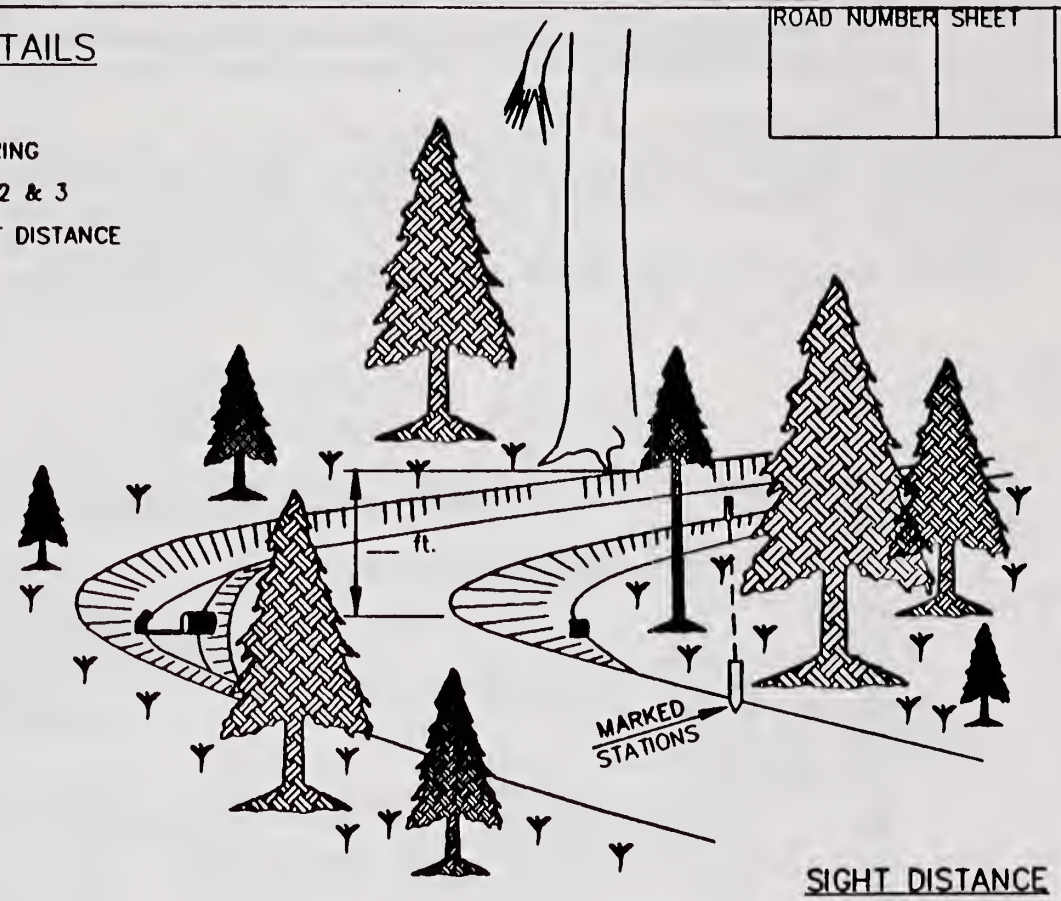
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ROAD NUMBER	SHEET	TOTAL SHEETS

CLEARING DETAILS



CLEARING LIMITS
TYPICAL
NO SCALE



SIGHT DISTANCE
TYPICAL
NO SCALE

NOTES

1. All conifers, hardwoods and brush within __ feet of the shoulders of the road or the bottom of the ditch shall be removed.

2. The area of sight distance clearing will be from the roadside clearing limit, to a line of sight between the beginning and ending stations marked on the ground. Conifers within this area shall be thinned to approximately a 12 foot trunk spacing, except where marked with paint or flagging for removal to an alternate spacing. All hard-woods & brush within these limits, shall be removed.

3. Branches on remaining conifers shall be trimmed from ground level to a clearing height limit __ feet above the roadbed or to a limit of 60% of the tree's height, whichever is less. Limbs of vegetation shall be cut so as to not protrude within the clearing limits.

THIS DRAWING IS PLOTTED AT AT 1 TO 1.

H0000025

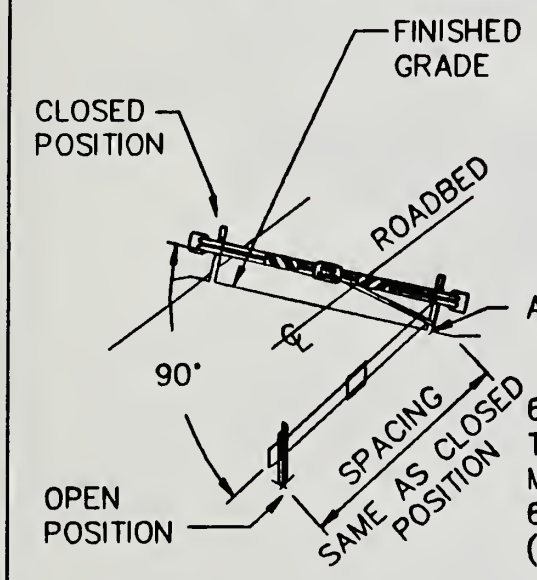
11-12-88

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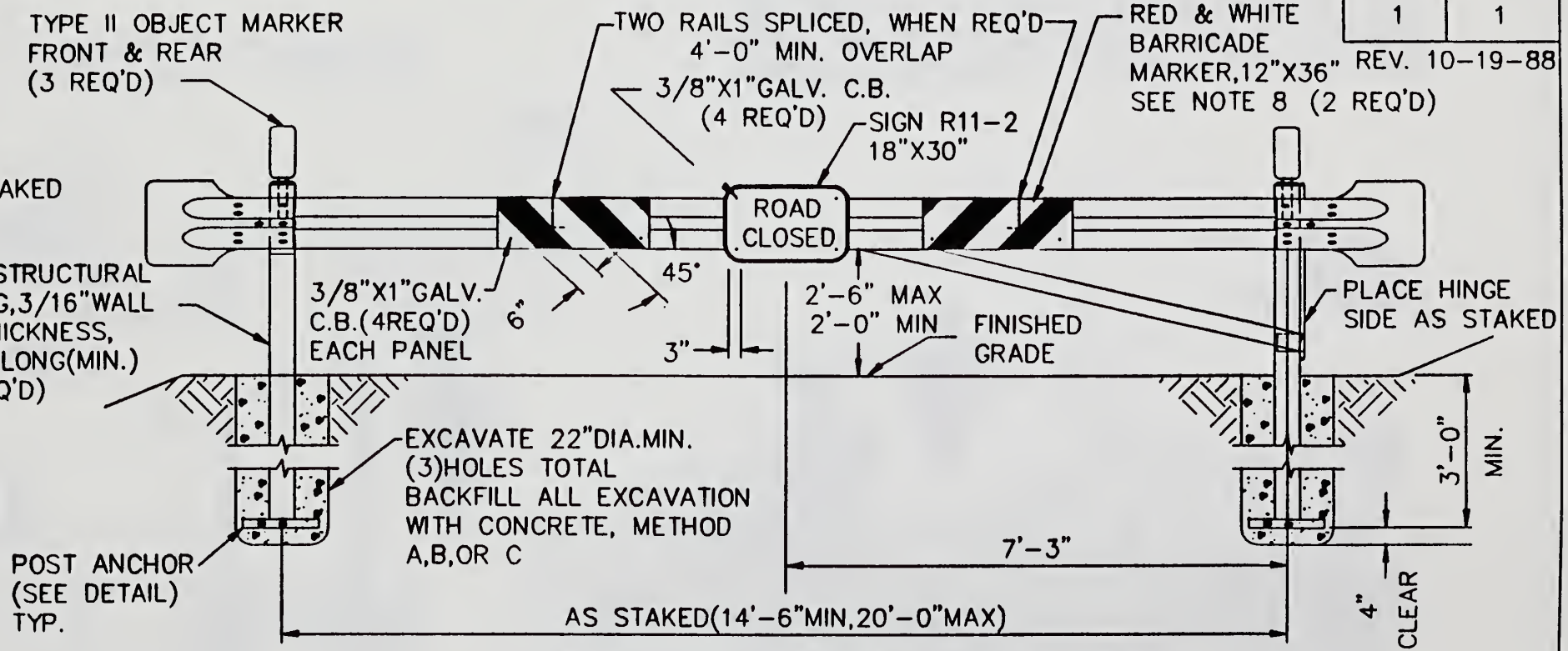
GATE BARRIER RAIL TYPE

SHEET	TOTAL SHEETS
1	1

REV. 10-19-88



INSTALLATION ISOMETRIC



ELEVATION VIEW

H0000028 9/10/88

NOTES:

1. ALL STEEL COMPONENTS EXCEPT GUARDRAIL, END SECTIONS, PIPE & BOLTS PER A.S.T.M. DESIGNATION A36.
2. ALL WELDS 3/16" EXCEPT AS SHOWN. WELDING TO BE PER STRUCTURAL WELDING CODE-AWS.
3. GATE SECTION TO BE "ECONO-BEAM" GUARDRAIL AS MANUFACTURED BY ARMCO STEEL FABRICATORS OF EQUAL. END SECTIONS TO BE OF LIKE MATERIAL & CROSS SECTION USED FOR GATE SECTION.
4. TYPE II OBJECT MARKERS & R11-2 SIGN TO BE PER M.U.T.C.D. STANDARDS & CURRENT REVISIONS.
5. PEEN ALL BOLT ENDS TO PREVENT REMOVAL. BOLTS ON BRACE MUST BE CAPABLE OF BEING LOOSENED FOR ADJUSTING GATE.
6. FIELD VERIFY GROUND ELEVATIONS BEFORE CUTTING POSTS FOR LENG[illegible]NTIRE STRUCTURE TO BE SHOP FABRICATED EXCEPT MINOR FIELD ADJUSTMENTS ARE PERMITTED IN LOCKING DEVICE & RECEIVING SLOTS.
7. ENTIRE STRUCTURE EXCEPT SIGN & OBJECT MARKER TO BE THOROUGHLY CLEANED OF RUST, SLAG, & OTHER FOREIGN MATTER & PRINED WITH ONE COAT OF WHITE MACHINE FAINT IN ACCORDANCE WITH SECTION 708.
8. BARRICADE MARKER PANELS TO BE ALUMINUM OVERLAIN WITH "3M" REFLECTIVE SHEETING, WIDE ANGLE, FLAT-TOP, PRESSURE SENSITIVE, NO. 3280, IMPERIAL WHITE, TO WHICH TRANSPARENT "STOP SIGN RED", SPRAYING TO PRODUCE STRIPING. EQUAL PRODUCTS & PROCESSES MAY BE APPROVED.
9. LUBRICATE HINGE ASSEMBLY FULL LENGTH WITH MULTIPURPOSE MARINE A-LUBE OR EQUAL.

H0000042 9/10/88

H0000028

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SHEET	TOTAL SHEETS
1	1

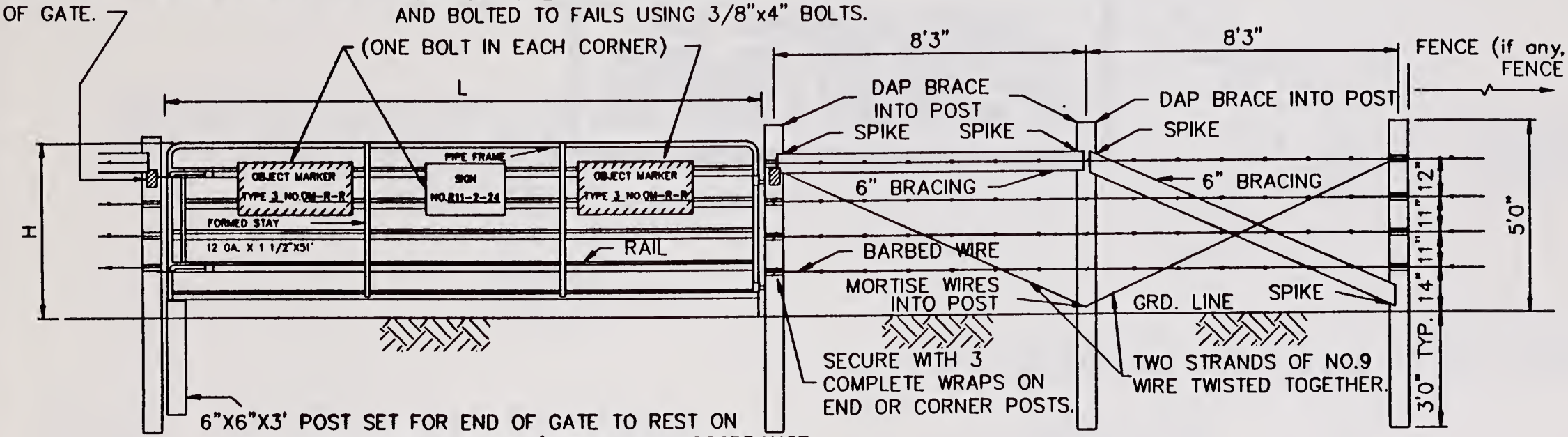
9-6-88

POWDER RIVER GATE – OPTION 2

GATE STANDARD BRACE PANEL

(Each end of gate)

REV. 10-20-88
REV. 10-22-88



NOTES:

1/ GATE FRAME IS MADE OF 1 1/4" HIGH STRENGTH TUBING, 1.66" O.D. (MIN. YIELD STRENGTH 50,000 P.S.I.).

2/ UNLESS OTHERWISE DESIGNATED ON THE PLANS OR IN THE SCHEDULE OF ITEMS, THE IRON GATE WITH A 16' OPENING WILL BE USED.

3/ ALL POSTS IN BRACE PANELS SHALL BE ROUGH SAWN 6"X6"X8', PONDEROSA PINE, DOUGLAS FIR OR WESTERN LARCH, NO. 2 OR STANDARD GRADE. POSTS SHALL BE PRESSURE TREATED WITH PENTACHLOROPHENAL (0.4 lbs/ft.3 RETENTION.)

4/ ALL METAL PARTS SHALL BE PAINTED LIGHT GREEN

5/ INSTALL A 6"X6"X8' TIE BACK POST (EQUIVALENT TO THOSE USED IN BRACE PANEL) TO SECURE GATE IN OPEN POSITION. POST MUST BE SET TO RECEIVE LATCH PINS IN ORDER THAT GATE MAY BE LOCKED OPEN. INSTALL TYPE 2 OBJECT MARKER (6"x 12"). ON SIDE OF TIE BACK POST, AWAY FROM GATE.

6/ BARBED WIRE TO BE 12 1/2 GAGE, 2 POINT WITH BABED 4"–5" APART.

7/ ALL SIGNS AND OBJECT MARKERS REQUIRED ARE INCIDENTAL TO GATE CONSTRUCTION.

S.F. = 1 TO 1

H0000044 9/6/88

H0000030

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NOTES:

1/ GATE FRAME IS MADE OF 1 1/4" HIGH STRENGTH TUBING, 1.66" O.D. (MIN. YIELD STRENGTH 50,000 P.S.I.).

2/ UNLESS OTHERWISE DESIGNATED ON THE PLANS OR IN THE SCHEDULE OF ITEMS, THE IRON GATE WITH A 16' OPENING WILL BE USED.

3/ ALL POSTS IN BRACE PANELS SHALL BE ROUGH SAWN 6"X6"X8', PONDEROSA PINE, DOUGLAS FIR OR WESTERN LARCH, NO. 2 OR STANDARD GRADE. POSTS SHALL BE PRESSURE TREATED WITH PENTACHLOROPHENAL (0.4 lbs/ft.3 RETENTION.)

4/ ALL METAL PARTS SHALL BE PAINTED LIGHT GREEN

5/ INSTALL A 6"X6"X8' TIE BACK POST (EQUIVALENT TO THOSE USED IN BRACE PANEL) TO SECURE GATE IN OPEN POSITION. POST MUST BE SET TO RECEIVE LATCH PINS IN ORDER THAT GATE MAY BE LOCKED OPEN. INSTALL TYPE 2 OBJECT MARKER (6"x 12"). ON SIDE OF TIE BACK POST, AWAY FROM GATE.

6/ BARBED WIRE TO BE 12 1/2 GAGE, 2 POINT WITH BABED 4"-5" APART.

7/ ALL SIGNS AND OBJECT MARKERS REQUIRED ARE INCIDENTAL TO GATE CONSTRUCTION.

D
H0000044 9/6/88

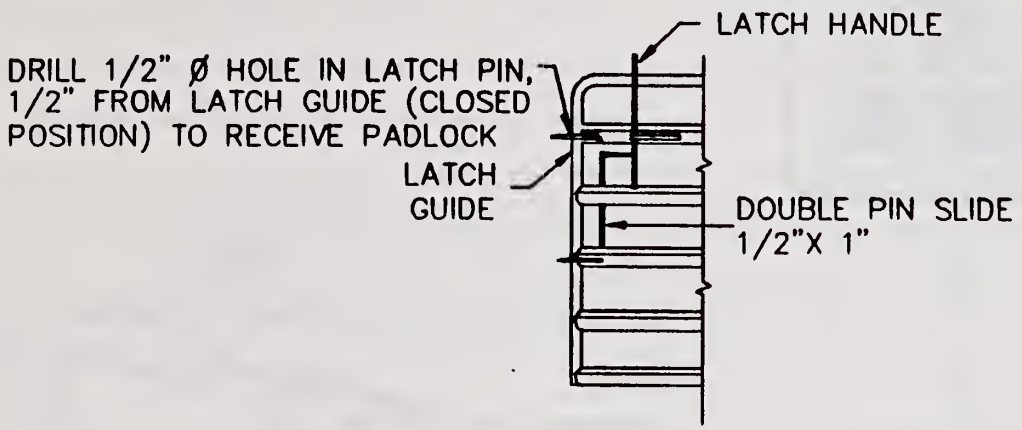
THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

SHEET	TOTAL SHEETS
1	1

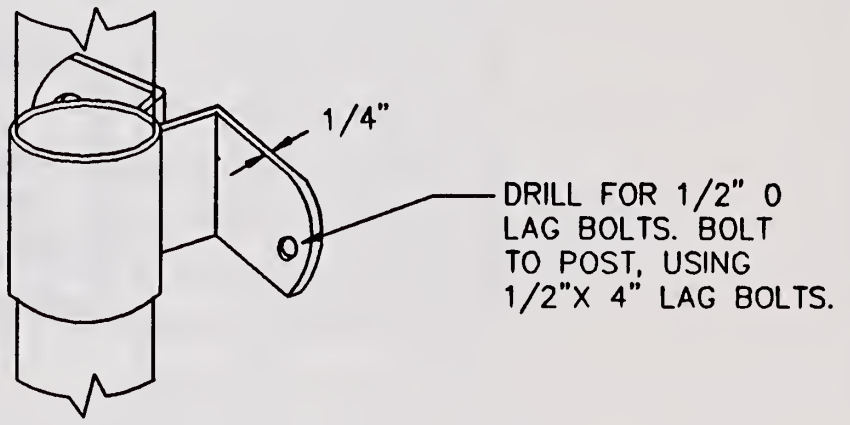
9-11-88
REV. 10-19-88

POWDER RIVER GATE – OPTION 2
H0000031

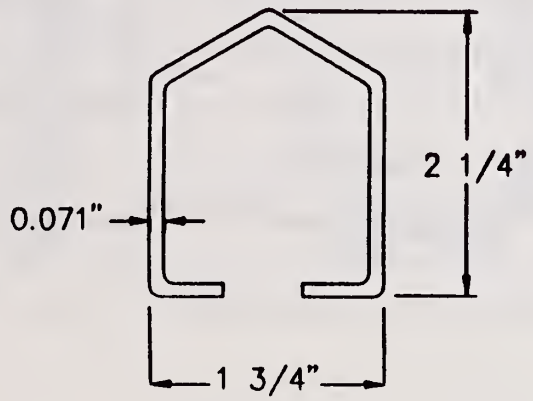
LATCH DETAIL



HINGE DETAIL



RAIL SECTION DETAIL

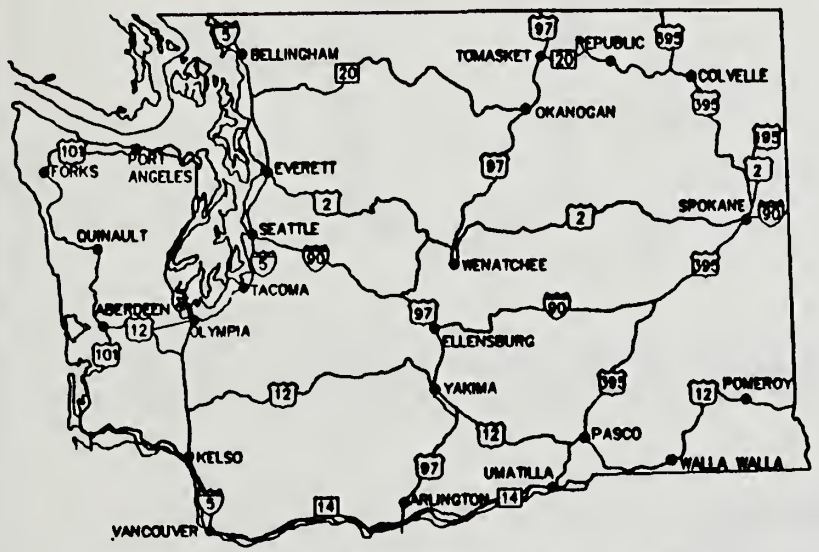


FORMED STAY DETAIL



OPENING	HEIGHT(H)	LENGTH(L)	NO. FORM STAYS
10 FT.	52"	9'--9"	1
12 FT.	52"	11'--9"	2
14 FT.	52"	13'--9"	3
16 FT.	52"	15'--9"	4
18 FT.	52"	17'--9"	4
20 FT.	52"	19'--9"	4

SIZE CHART



KEY MAP OF WASHINGTON SHOWING LOCATION OF PROJECT

HD000001
11-10-88

UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE - REGION SIX

_____ NATIONAL FOREST

_____ RANGER DISTRICT

DRAWINGS FOR PROPOSED

_____

NAME

ROAD NO. LENGTH TYPE OF WORK

INDEX TO SHEETS	
NO.	DESCRIPTION
1	TITLE SHEET
2	VICINITY MAP
	ESTIMATE OF QUANTITIES

HD000003
11-10-88

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H0000001
11-17-88

HD000004
11-10-88

DESIGNED BY:

NAME DATE

REVIEWED BY:

NAME TITLE DATE

RECOMMENDED BY:

NAME TITLE DATE

APPROVED BY:

NAME TITLE DATE

NAME FOREST ENGINEER DATE

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ESTIMATE OF QUANTITIES

H0000003
9-25-88

SHEET	TOTAL SHEETS

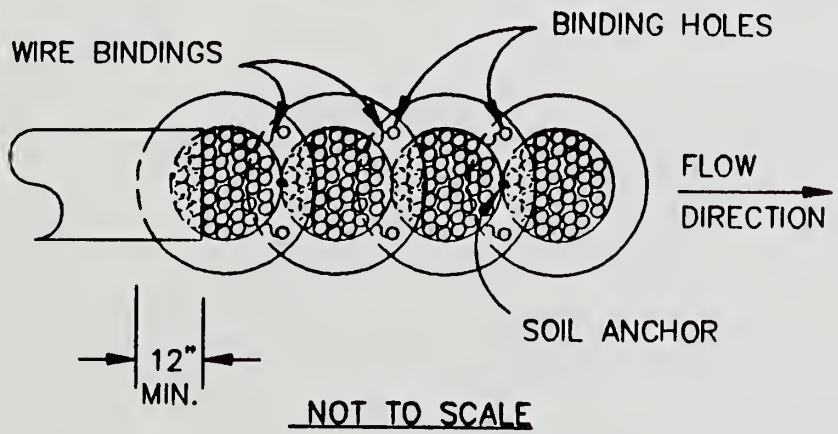
ROAD NUMBERS										TOTALS		REMARKS
PROJECT LENGTH (MILES)												
ITEM NO.	DESCRIPTION	METHOD OF MEASURE	UNIT	QUANTITIES								

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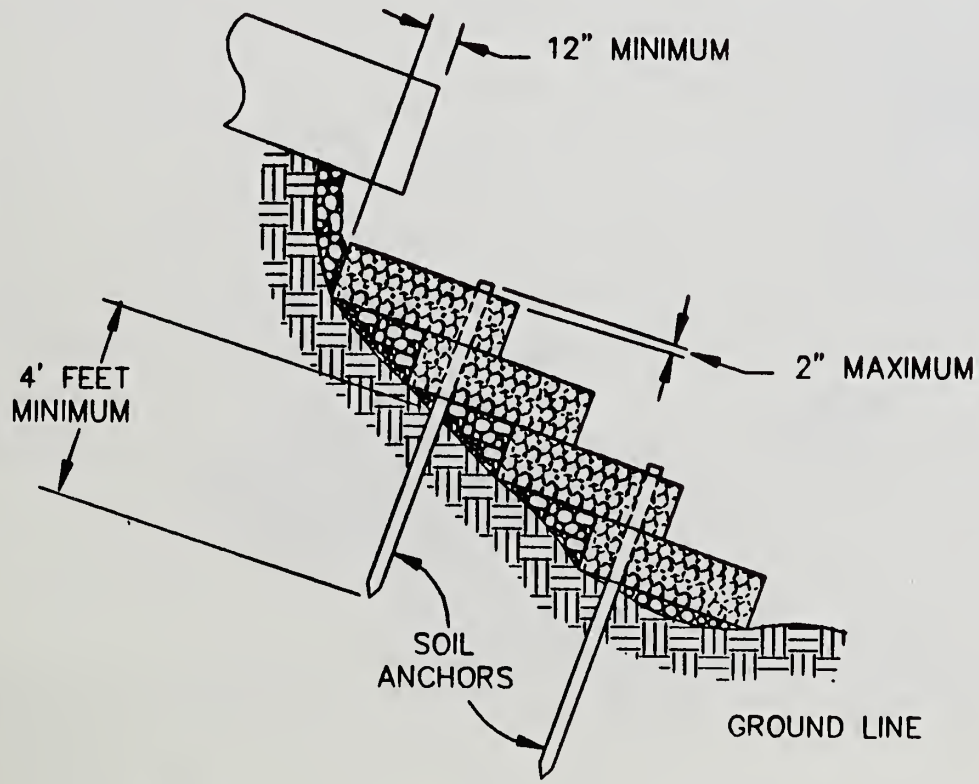
TIRE ENERGY DISSIPATOR

ROAD NUMBER	SHEET NUMBER	TOTAL SHEETS
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TYPE A

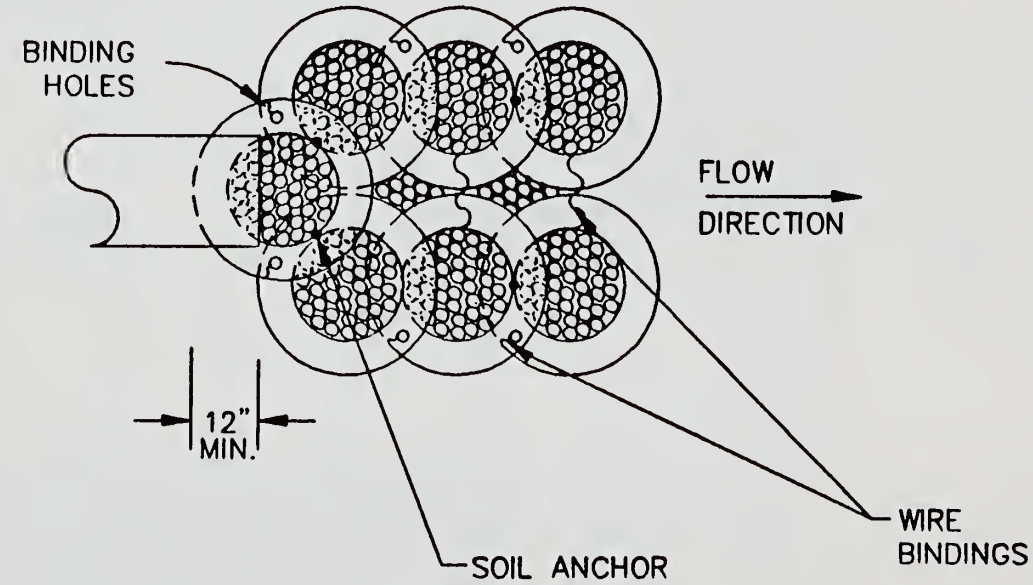


NOT TO SCALE



NOT TO SCALE

TYPE B



NOT TO SCALE

NOTES

1. THE MINIMUM SIZE TIRE SHALL BE _____.
2. DESIGNATED ROCK SOURCE _____.
3. BINDING HOLES SHALL BR CENTERED IN THE SIDEWALLS OF EACH TIRE.
4. SOIL ANCHORS SHALL BE PLACED AT THE FIRST AND LAST TIRE OVERLAP AND AT EQUALLY SPACED INTERVALS NOT TO EXCEED 6 FEET.

Date

H0000[illegible]5

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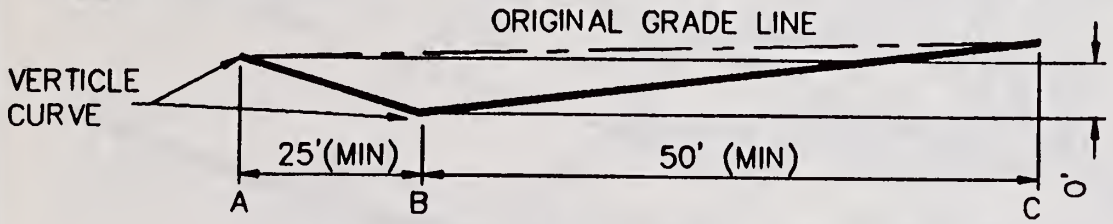
DRAIN DIP

TYPE: (EXCAVATED)

H0000007

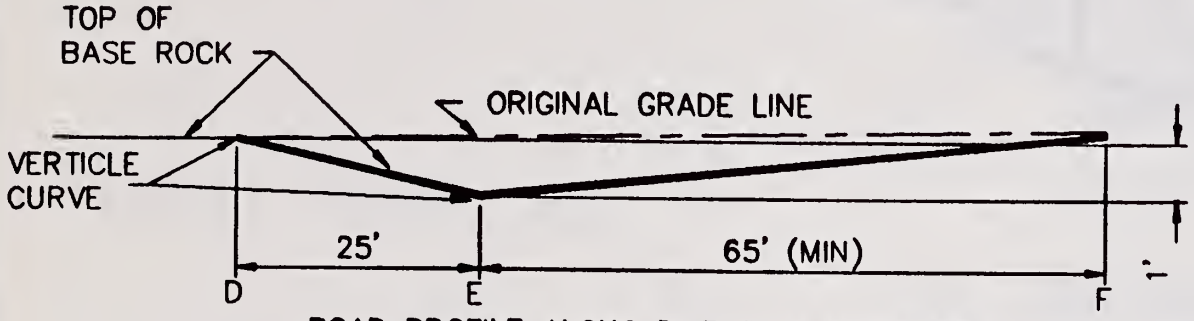
SHEET	TOTAL SHEETS
1	1

REV. 10-19-88
REV. 10-22-88



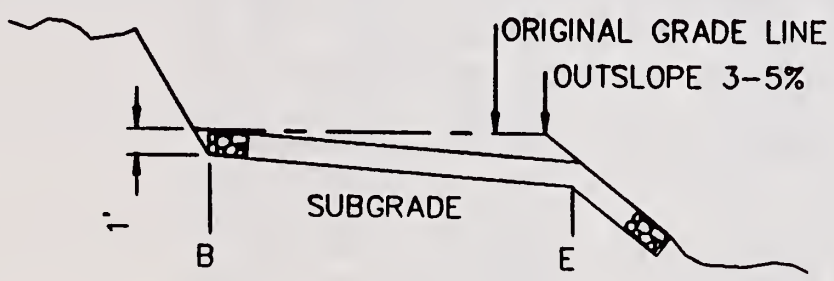
ROAD PROFILE ALONG A-B-C OF DRAIN DIP

NOTE: PLAN OF DIP SHOWN IS FOR OUTSLOPED ROLLING DIP, DIPS MAY BE EITHER INSLOPED OR OUTSLOPED. WHEN INSLOPED, DIPS SHALL DISCHARGE INTO A CULVERT, DROP INLET, OR OVERSIDE DRAIN, OR DRAINAGE DITCH. WHEN OUTSLOPED, THEY SHALL DISCHARGE INTO AN OVERSIDE DRAIN OR ON TO NATURAL GROUND. THE MINIMUM CROSS GRADE FROM "B" TO "E" IS 4% GREATER THAN THE ORIGINAL ROAD GRADE. SKEW LINE B-E TO FIT LOW POINT IN DRAW, IF LOCATED IN NATURAL DRAIN.



ROAD PROFILE ALONG D-E-F OF DRAIN DIP

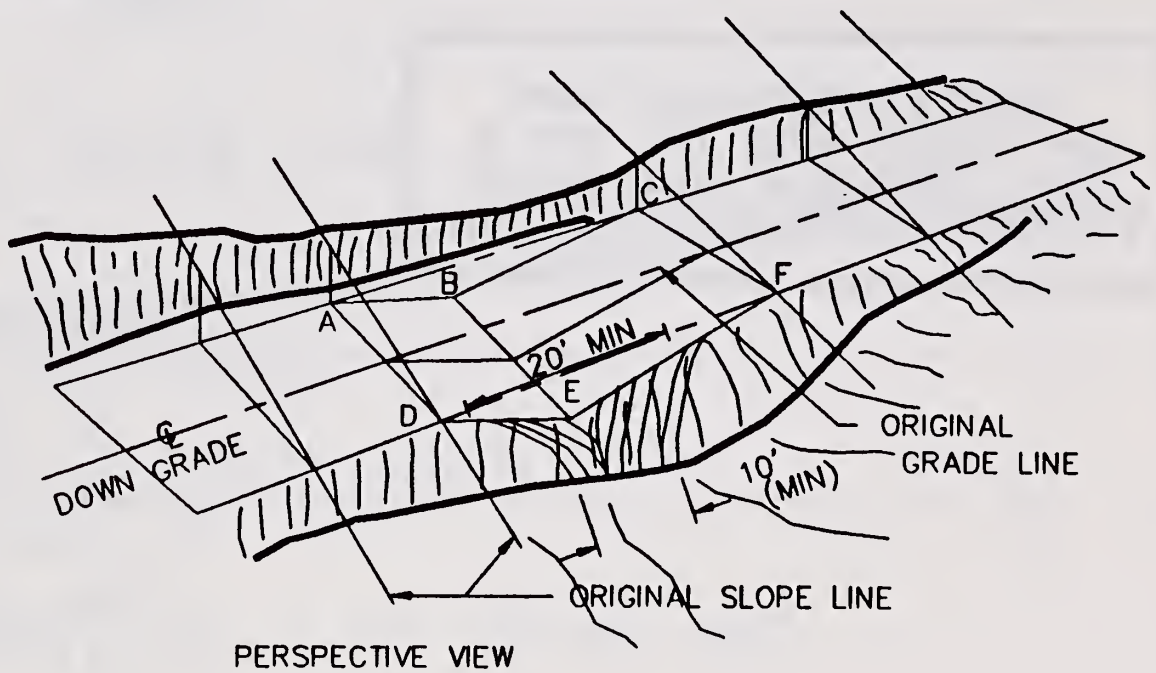
HD000019 9/11/88



ROCK SPILL APRON 15' WIDE WITH MATERIAL AS SHOWN ON SCHEDULE OF ITEMS TO TOE OF FILL.

S.F. = 1 TO 1

HD000020 9/11/88

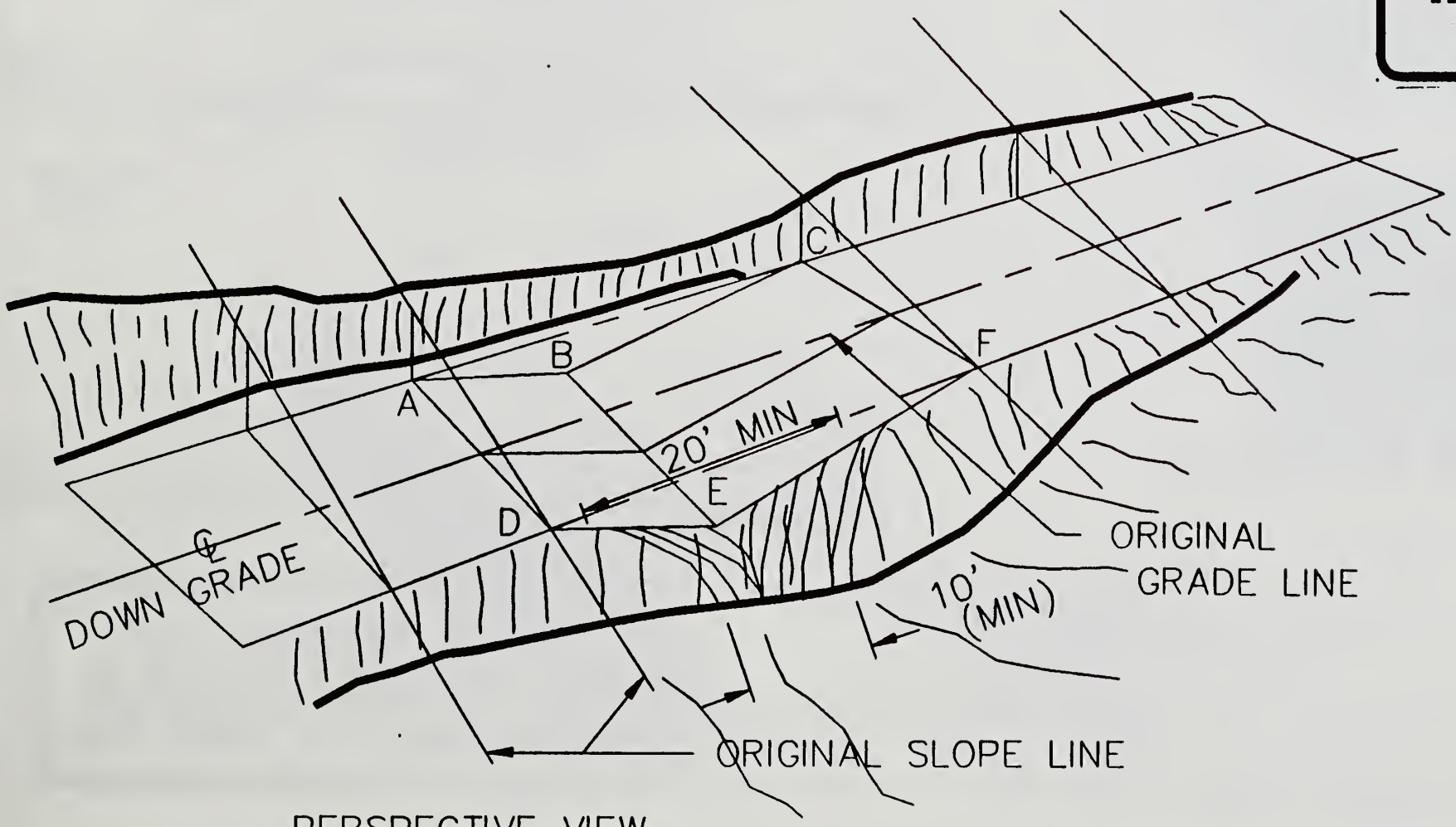


PERSPECTIVE VIEW

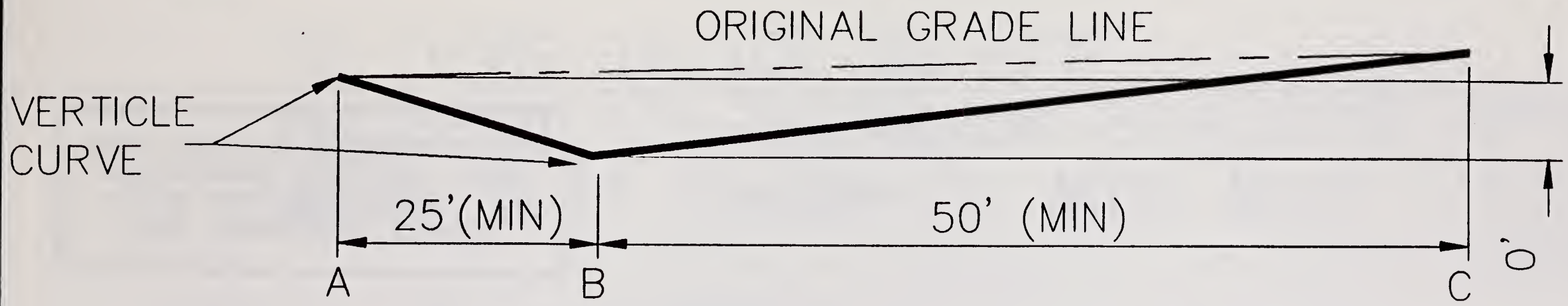
HD000021 9/11/88

TE: PLAN OF DIP SHOWN IS FOR OUTSL D ROLLING DIP, DIPS MAY BE EITHER INSLOPED OR OUTSLOPED. WHEN INSLOPED, DIPS SHALL DISCHARGE INTO A CULVERT, DROP INLET, OR OVERSIDE DRAIN, OR DRAINAGE DITCH. WHEN OUTSLOPED, THEY SHALL DISCHARGE INTO AN OVERSIDE DRAIN OR ON TO NATURAL GROUND. THE MINIMUM CROSS GRADE FROM "B" TO "E" IS 4% GREATER THAN THE ORIGINAL ROAD GRADE. SKEW LINE B–E TO FIT LOW POINT IN DRAW, IF LOCATED IN NATURAL DRAIN.

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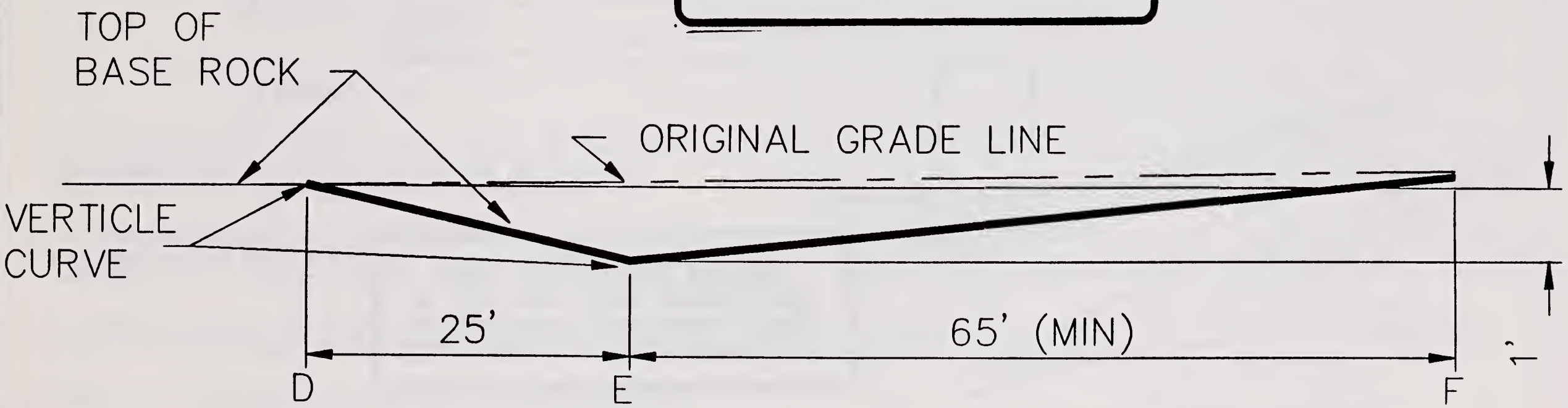


PERSPECTIVE VIEW



ROAD PROFILE ALONG A–B–C OF DRAIN DIP

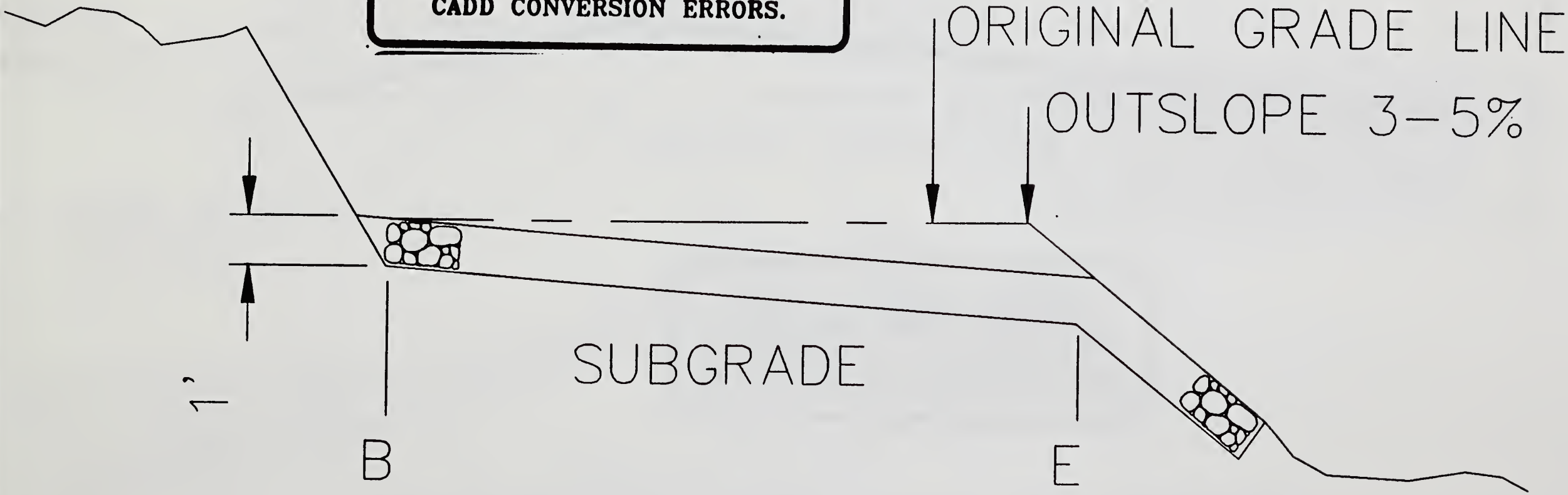
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ROAD PROFILE ALONG D–E–F OF DRAIN DIP

HD000019 9/11/88

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ROCK SPILL APRON 15' WIDE WITH MATERIAL AS SHOWN ON SCHEDULE OF ITEMS TO TOE OF FILL.

HD000020 6/11/88

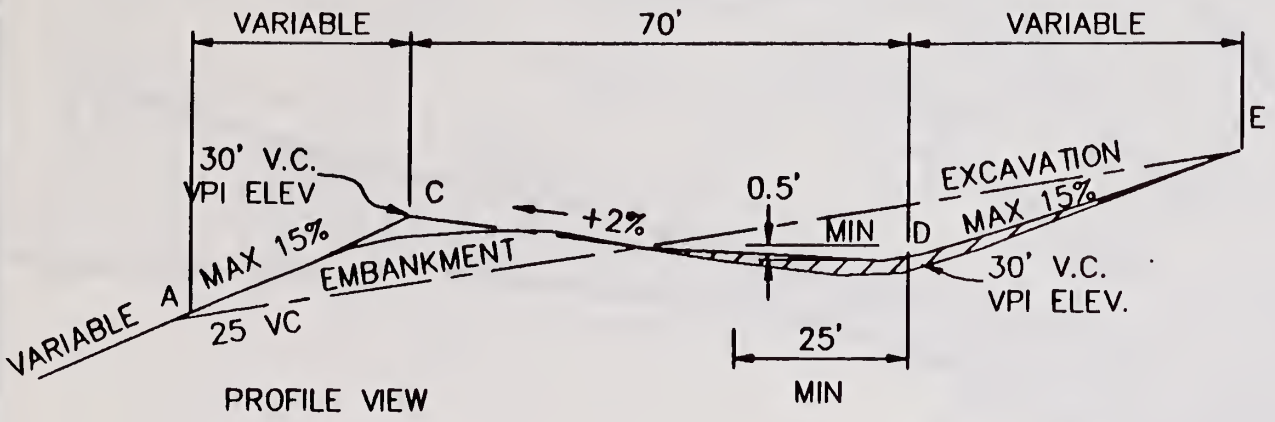
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DRAIN DIP

TYPE: (BALANCED)

SHEET	TOTAL SHEETS
1	1

9-4-88
REV. 10-19-88
REV. 10-22-88



PROFILE VIEW

NOTE: PLAN OF DIP SHOWN IS FOR OUTSLOPED ROLLING DIP, DIPS MAY BE EITHER INSLOPED OR OUTSLOPED. WHEN INSLOPED, DIPS SHALL DISCHARGE INTO A CULVERT, DROP INLET, OR OVERSIDE DRAIN, OR DRAINAGE DITCH. WHEN OUTSLOPED, THEY SHALL DISCHARGE INTO AN OVERSIDE DRAIN OR ON TO NATURAL GROUND. THE MINIMUM CROSS GRADE FROM "B" TO "E" IS 4% GREATER THAN THE ORIGINAL ROAD GRADE.

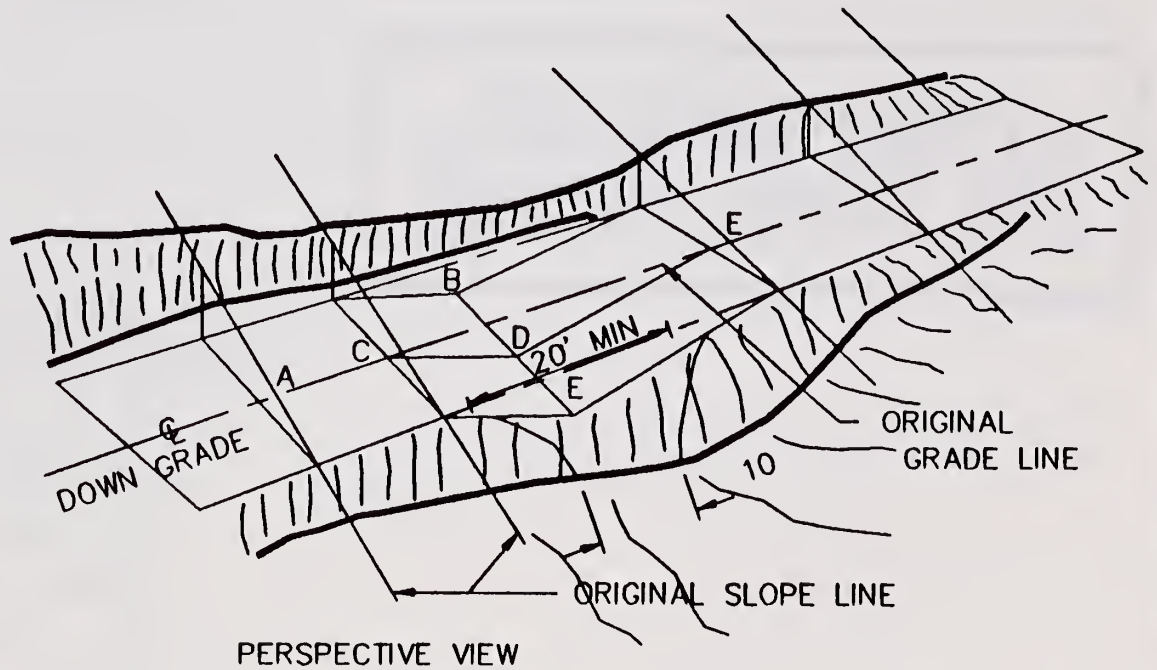
GENERAL NOTES

1. EXCAVATION BELOW THE EXISTING GRADE LINE WILL BE USED AS EMBANKMENT ABOVE THE EXISTING GRADE LINE ON THE DOWN GRADE SIDE OF THE DRAINAGE DIP, AS SPECIFIED BELOW.

2. THE MINIMUM DIFFERENCE IN ELEVATION BETWEEN VPI'S IS 1.5 FT. THIS WILL GIVE THE MINIMUM REQUIRED 0.5 FT. BETWEEN THE SAG AND CROWN OF THE VERTICAL CURVES.

3. THE MAXIMUM DEPTH OF EXCAVATION AND EMBANKMENT WILL FLUX-UATE WITH THE STEEPNESS OF THE GRADE.

4. PLACE THE "AS DIRECTED" DEPTH OF ROCK FILL FOR A DISTANCE OF 25 FEET ALONG THE ROAD BED, LOCATED IN THE SAG VERTICLE CURVE.



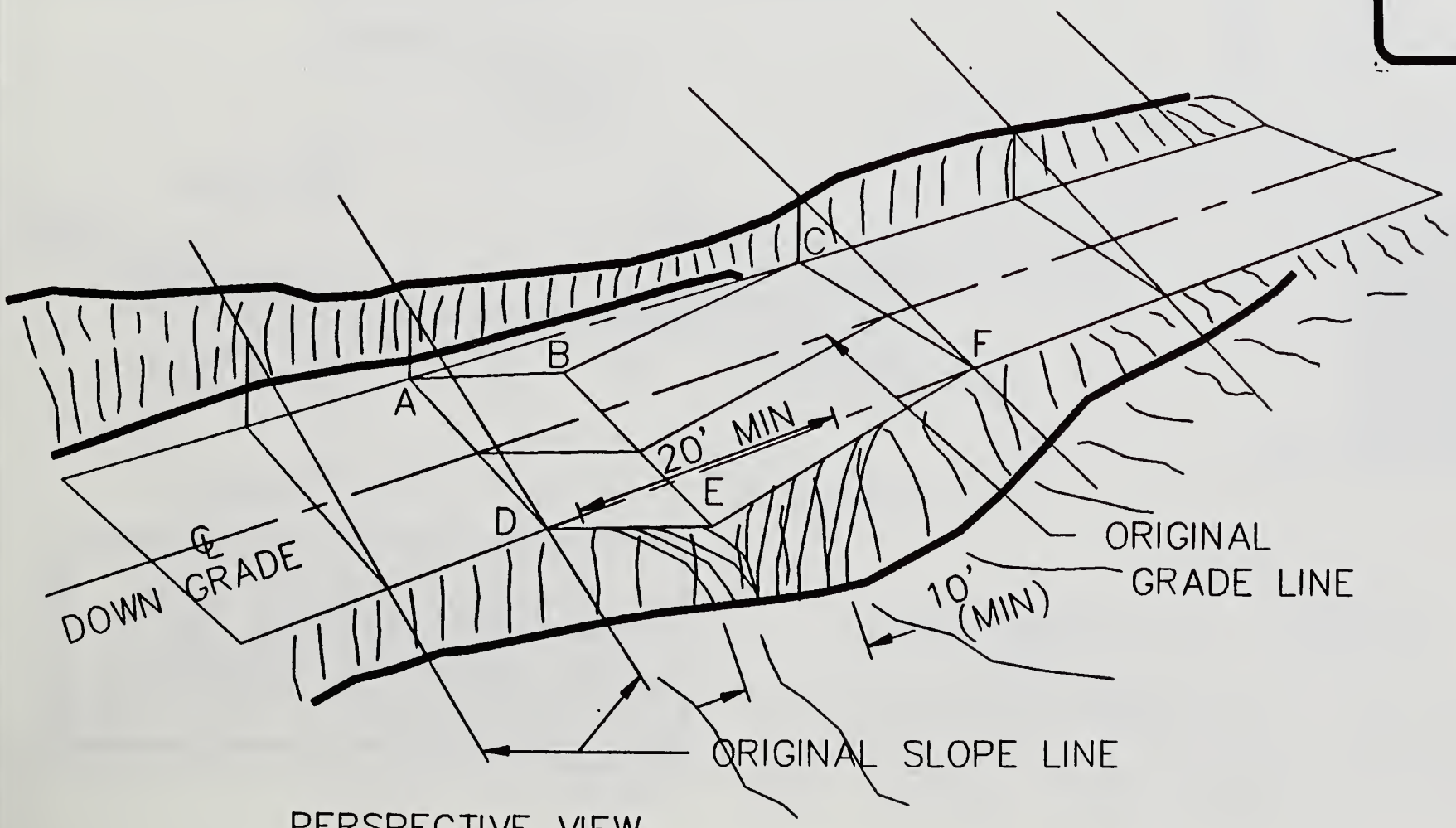
PERSPECTIVE VIEW

S.F. = 1 TO 1

H0000008

TE: PLAN OF DIP SHOWN IS FOR OUTSL D ROLLING DIP, DIPS MAY BE EITHER INSLOPED OR OUTSLOPED. WHEN INSLOPED, DIPS SHALL DISCHARGE INTO A CULVERT, DROP INLET, OR OVERSIDE DRAIN, OR DRAINAGE DITCH. WHEN OUTSLOPED, THEY SHALL DISCHARGE INTO AN OVERSIDE DRAIN OR ON TO NATURAL GROUND. THE MINIMUM CROSS GRADE FROM "B" TO "E" IS 4% GREATER THAN THE ORIGINAL ROAD GRADE. SKEW LINE B–E TO FIT LOW POINT IN DRAW, IF LOCATED IN NATURAL DRAIN.

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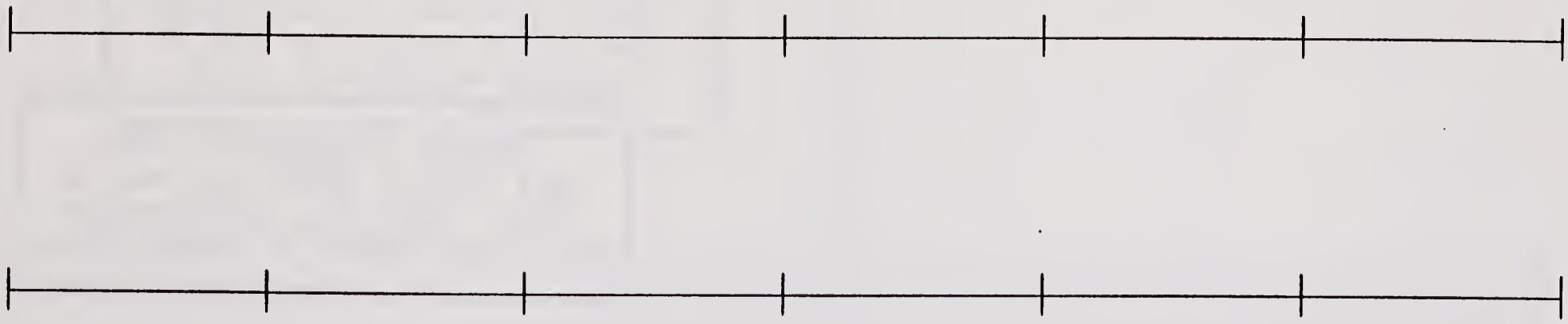


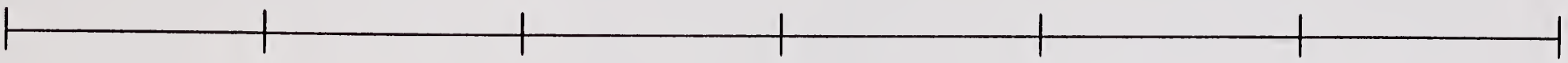
PERSPECTIVE VIEW

BAR GRAPH

ROAD NUMBER	SHEET	TOTAL SHEETS
	1	1

9-4-88
REV. 10-18-88





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H0000009

H0000010

PROJECT WORK LIST

ROAD NUMBER	SHEET	TOTAL SHEETS

9-10-88
REV. 10-19-88

MILE POST OR STATION	REFERENCE POINT OR WORK REQUIRED

MILE POST OR STATION	REFERENCE POINT OR WORK REQUIRED

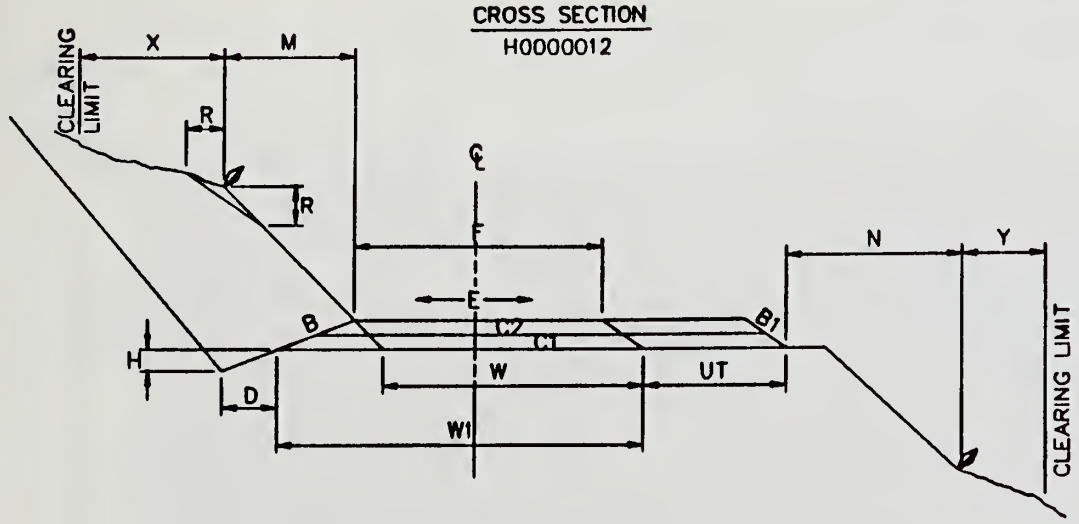
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ROAD NUMBER	SHEET	TOTAL SHEETS

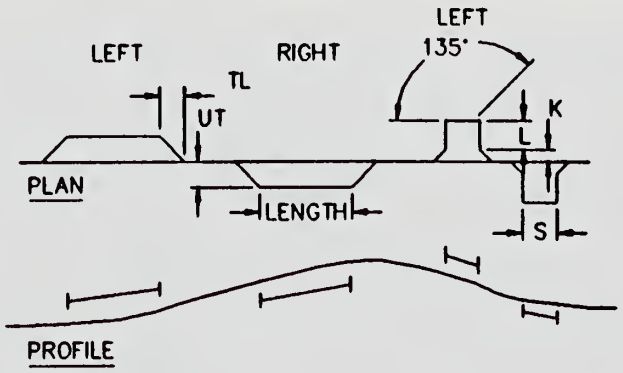
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ROAD STRUCTURE DETAILS

CROSS SECTION
H0000012



TURNOUT AND TURNAROUND SYMBOLS



ROAD NUMBER	SEGMENT	STATION or MILE POST	TO STATION or MILE POST	CLEARING WHICHEVER IS GREATER FT: WIDTH BEYOND SHOULDER	CLEARING: BEYOND SLOPE STAKE X	CLEARING: BEYOND SLOPE STAKE Y	GRADING: CONSTRUCTION TOLERANCE	GRADING: OUTSLOPE (O) INSLOPE (I) CROWN (C) % E	GRADING: ROADBED WIDTH W	GRADING: ROADBED WIDTH W1	GRADING: SLOPE ROUNDING R	GRADING: DITCH DIMENSIONS D	GRADING: DITCH DIMENSIONS H	GRADING: TURNOUT WIDTH UT	GRADING: TURNOUT TRANSITION LENGTH TL	GRADING: TURNAROUND TAPER K	GRADING: TURNAROUND LENGTH L	GRADING: TURNAROUND WIDTH S	PAVEMENT STRUCTURE: TRAVELED WAY WIDTH F	PAVEMENT STRUCTURE: GRADUATION C1	PAVEMENT STRUCTURE: GRADUATION C2	PAVEMENT STRUCTURE: COMPACTED DEPTH C1	PAVEMENT STRUCTURE: COMPACTED DEPTH C2	PAVEMENT STRUCTURE: SLOPE RATIO B	PAVEMENT STRUCTURE: SLOPE RATIO B1	REVEGETATION: SEEDING, FERTILIZING and/or MULCHING AREA M	REVEGETATION: N	REVEGETATION: D	REVEGETATION: X	REVEGETATION: Y

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H0000012

ROAD STRUCTURE DETAILS

NO SCALE

H0000013

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GENERAL NOTES

(1) CURVE WIDENING, WHEN SPECIFIED, SHALL BE ADDED TO INSIDE OF CURVE.

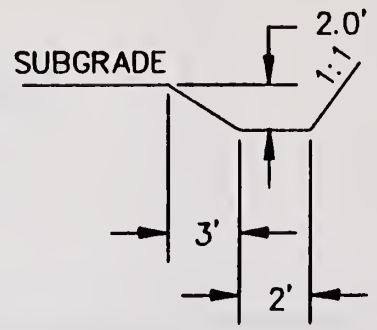
(2) ROADBED WIDTH, FILL WIDENING, CURVE WIDENING, TURNOUT LENGTHS, FILL AND BACKSLOPE RATIO SHALL BE AS SPECIFIED IN CONSTRUCTION STAKING NOTES AND/OR DRAWINGS.

(3) SEEDING, FERTILIZING AND/OR MULCHING AREA INCLUDES SECTIONS SHOWN ON TYPICALS AND ALL OTHER AREAS DISTURBED BY CONTRACTOR (INCLUDING BURN BAYS AND DECKING AREAS).

(4) TURNOUTS, TURNAROUNDS AND CURVE WIDENING SHALL BE SURFACED TO THE SAME DEPTH AS THE TRAVELED WAY AND TO THE DIMENSIONS SPECIFIED IN CONSTRUCTION STAKING NOTES AND/OR DRAWINGS.

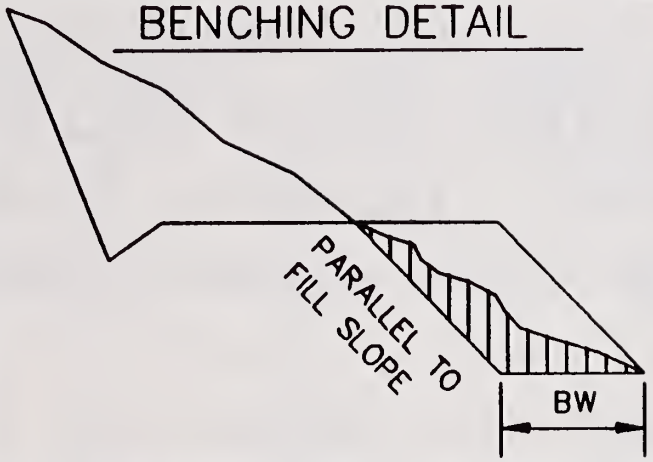
HD000025

SPECIAL DITCH SECTION



HD000028

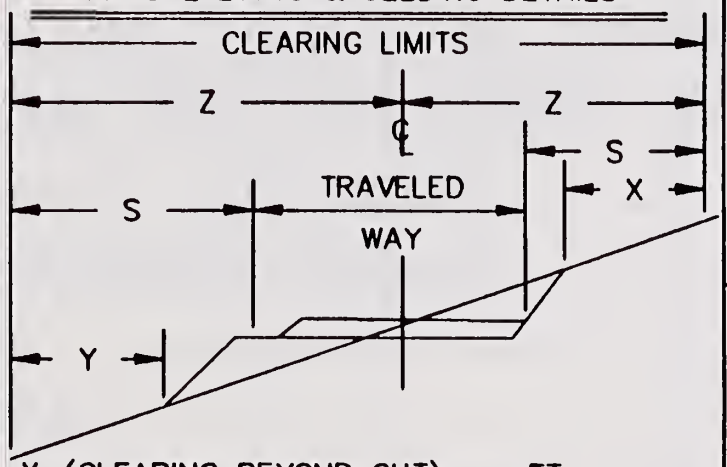
BENCHING DETAIL



ROAD NO.	SEG	STA/MP to STA/MP	BW

HD000026

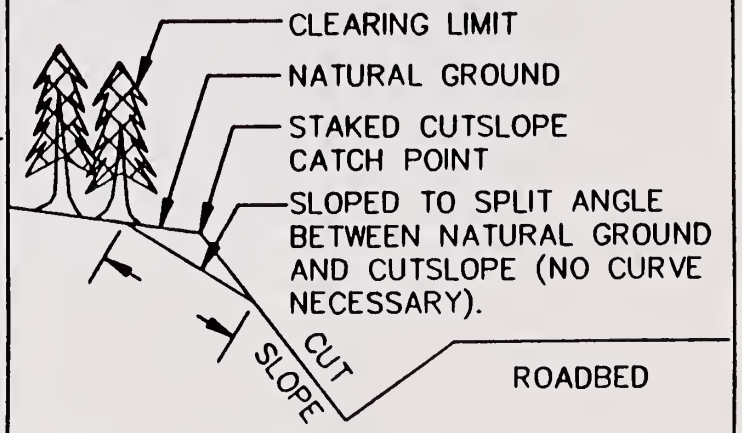
TYPICAL LIMITS & SEEDING DETAILS



X=(CLEARING BEYOND CUT)= . FT.
Y=(CLEARING BEYOND FILL)= . FT.
Z=(MIN. CLEARING)=SHOULDER PLUS . FT.
S=(AREA TO BE SEEDED)=CLEARING TO ROADBED, BOTH SIDES, AND ALL AREAS OUTSIDE CLEARING LIMITS DISTURBED BY CONSTRUCTION OPERATIONS, INCLUDING BURN BAYS, IF ANY.

HD000029

SLOPE ROUNDING DETAILS



AREAS TO BE ROUNDED:

ALL CUTS GREATER THAN IN HEIGHT WHICH ARE OR STEEPER, EXCLUDING SOLID ROCK CUTS.

HD000027

GENERAL NOTES

(1) CURVE WIDENING, WHEN SPECIFIED, SHALL BE ADDED TO INSIDE OF CURVE.

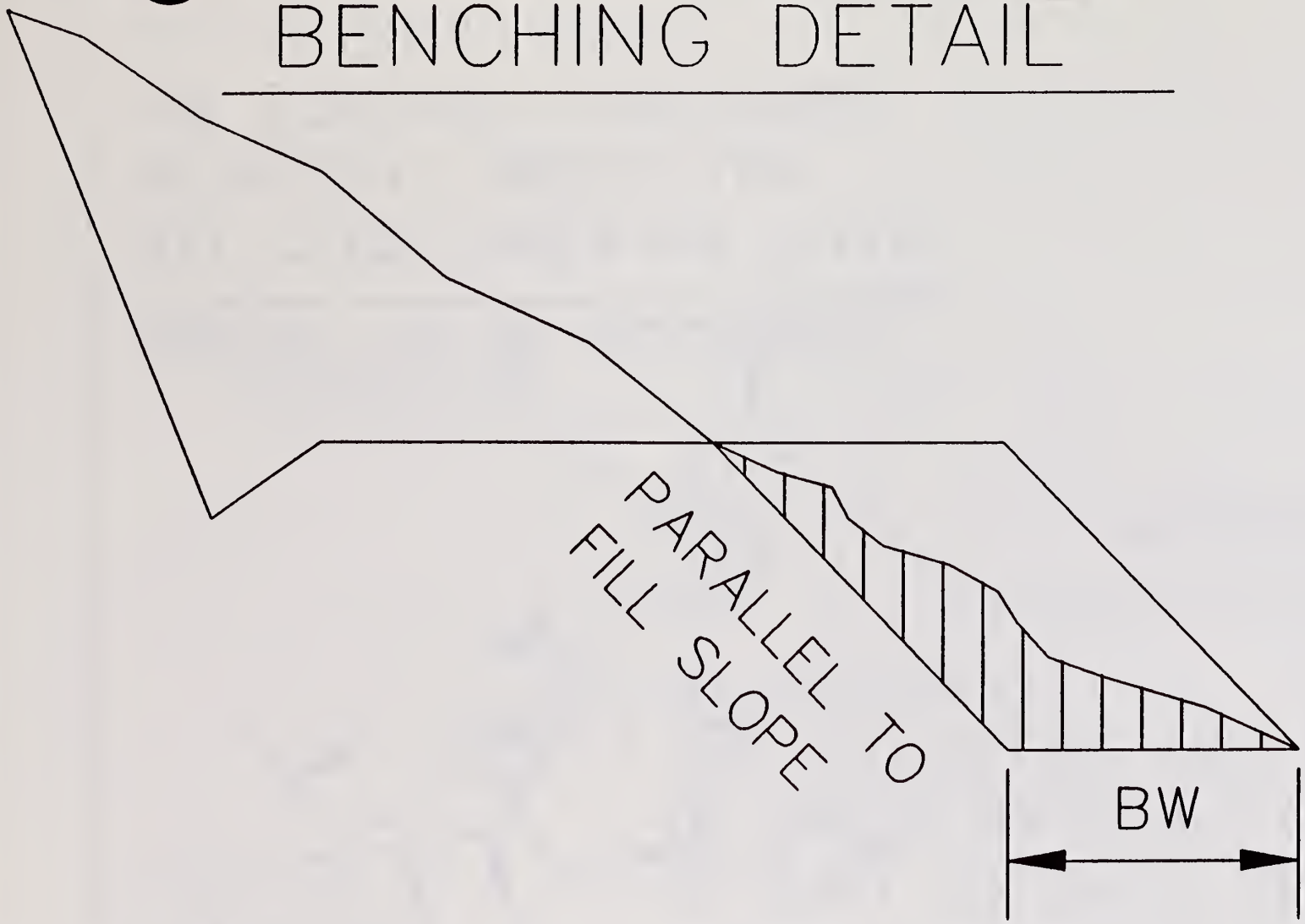
(2) ROADBED WIDTH, FILL WIDENING, CURVE WIDENING, TURNOUT LENGTHS, FILL AND BACKSLOPE RATIO SHALL BE AS SPECIFIED IN CONSTRUCTION STAKING NOTES AND/OR DRAWINGS.

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BENCHING DETAIL

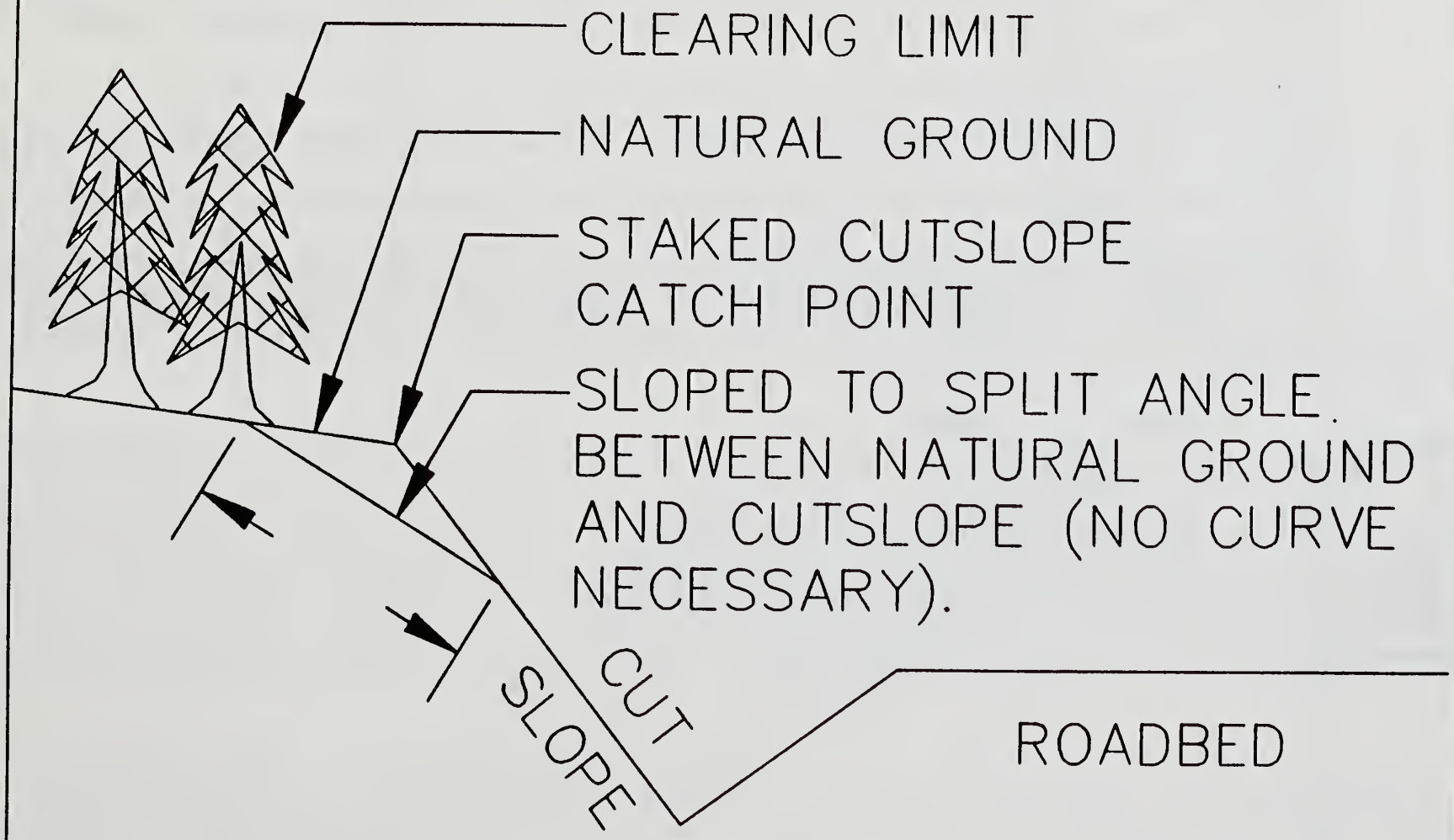


ROAD NO.	SEG	STA/MP to STA/MP	BW

HD000026

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SLOPE ROUNDING DETAILS

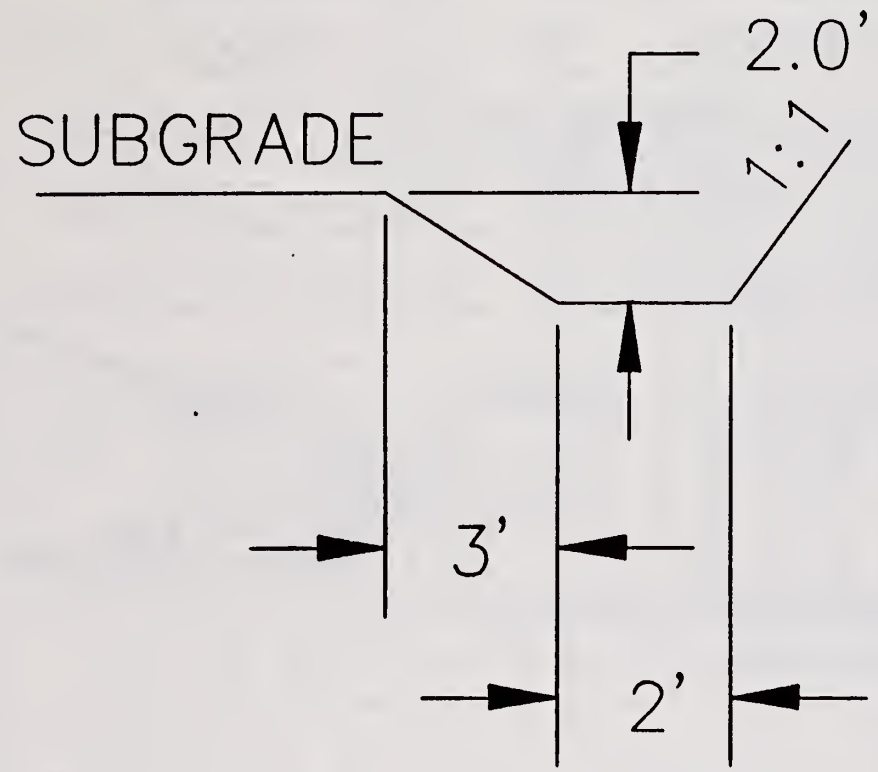


AREAS TO BE ROUNDED:

ALL CUTS GREATER THAN
IN HEIGHT WHICH ARE
OR STEEPER, EXCLUDING
SOLID ROCK CUTS.

HD000027

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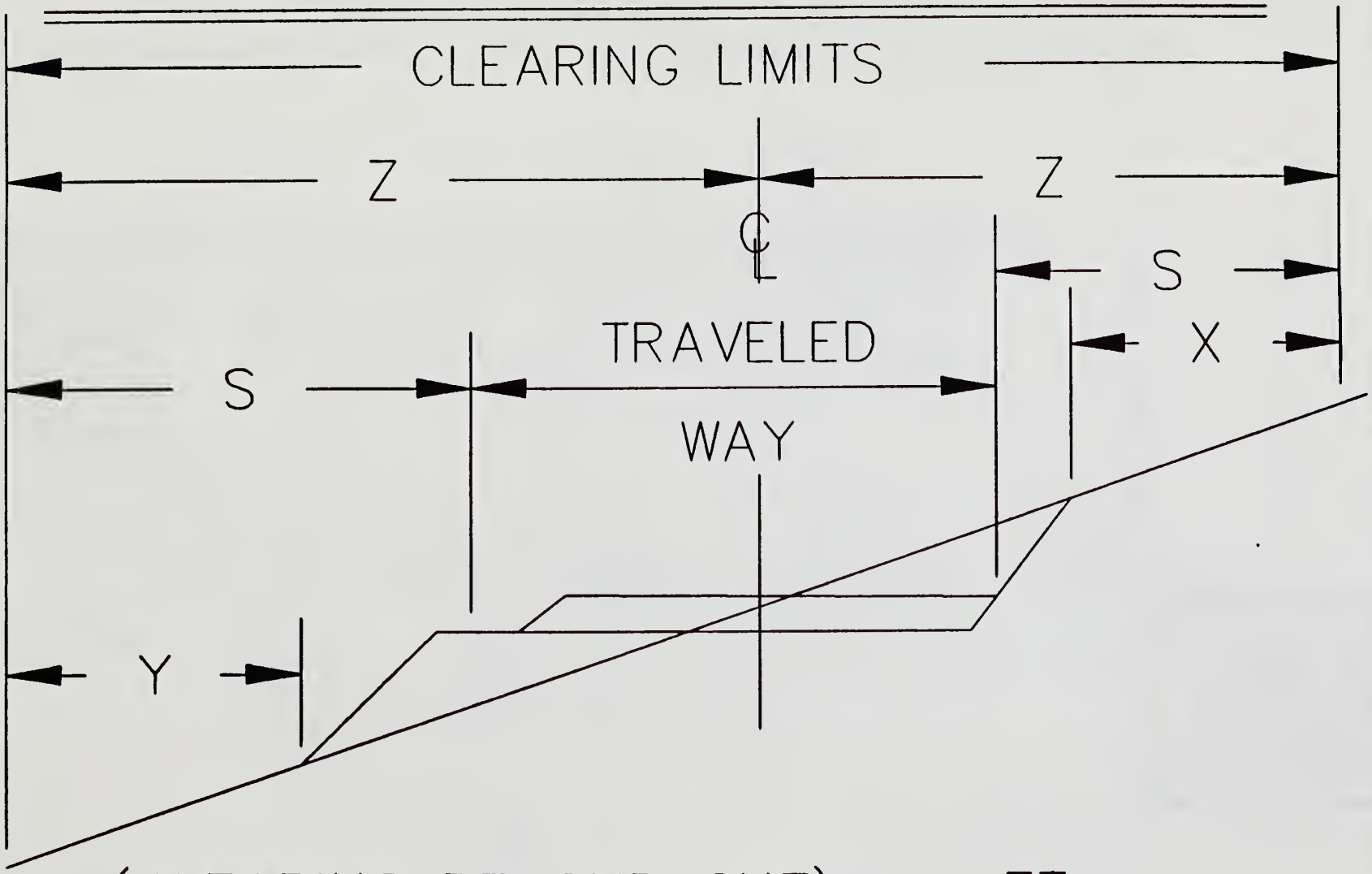


SPECIAL DITCH SECTION

HD000028

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TYPICAL LIMITS & SEEDING DETAILS



X=(CLEARING BEYOND CUT)= . FT.
Y=(CLEARING BEYOND FILL)= . FT.
Z=(MIN. CLEARING)=SHOULDER PLUS . FT.
S=(AREA TO BE SEEDED)=CLEARING TO ROADBED, BOTH SIDES, AND ALL AREAS OUTSIDE CLEARING LIMITS DISTURBED BY CONSTRUCTION OPERATIONS, INCLUDING BURN BAYS, IF ANY.

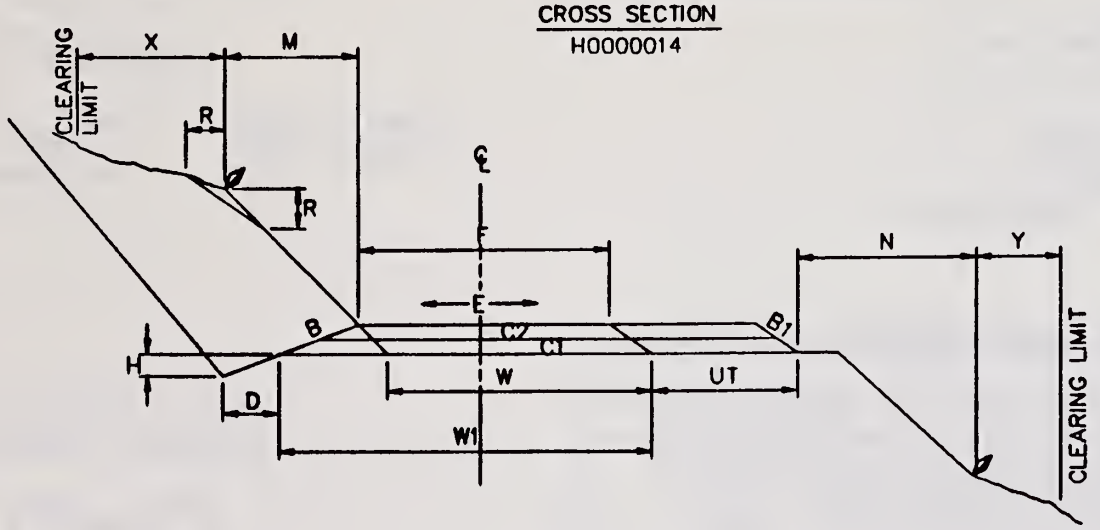
HD00002

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ROAD STRUCTURE DETAILS

SHEET	TOTAL SHEETS

CROSS SECTION
H0000014



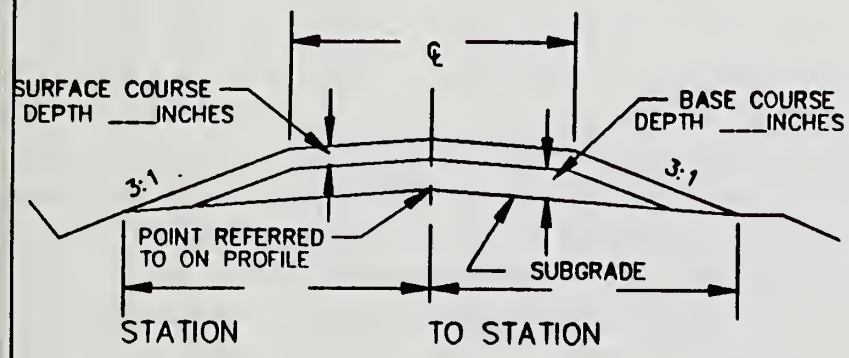
ROAD NUMBER	SEGMENT	STATION or MILE POST	TO STATION or MILE POST	CLEARING			GRADING								PAVEMENT STRUCTURE						REVEGETATION					
				WHICHEVER IS GREATER FT																						
				MINIMUM BEYOND SHOULDER	BEYOND SLOPE STAKE		CONSTRUCTION TOLERANCE	OUTSLOPE (0) INSLOPE (1) CROWN (2)	ROADBED WIDTH		SLOPE ROUNDING	DITCH DIMENSIONS		TRAVELED WAY WIDTH	GRADUATION		COMPACTED DEPTH		SLOPE RATIO		SEEDING, FERTILIZING and/or MULCHING AREA					
					X	Y		E	W	W1	R	D	H	F	C1	C2	C1	C2	B	B1	M	N	D	X	Y	

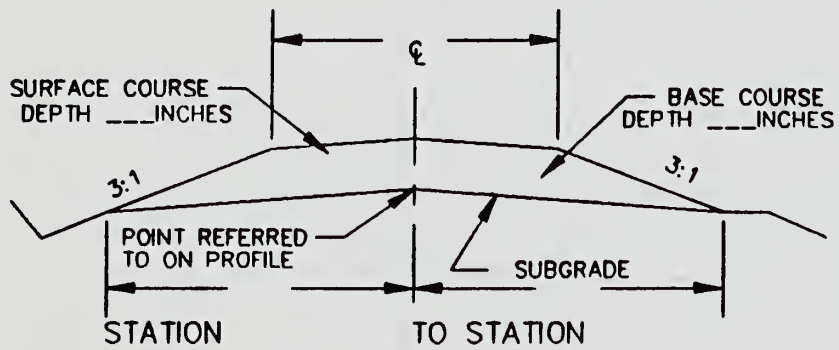
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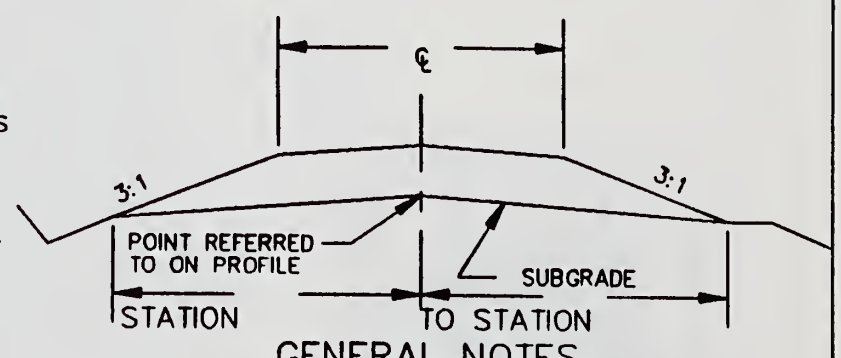
H0000015
10-25-88

SHEET	TOTAL SHEETS
1	1

ROAD STRUCTURE DETAILS
NO SCALE







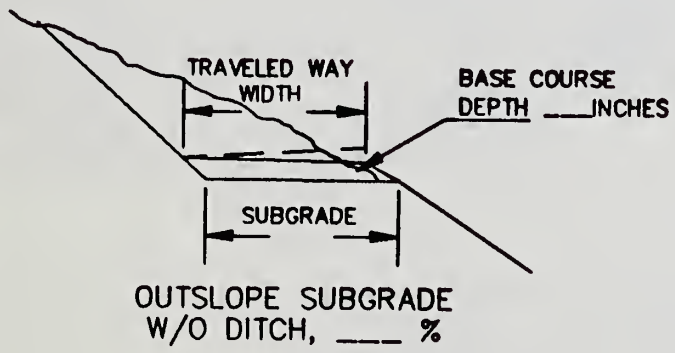
TYPICAL SURFACING SECTIONS

GENERAL NOTES

DEPTHS SHOWN ARE COMPACTED DEPTHS.

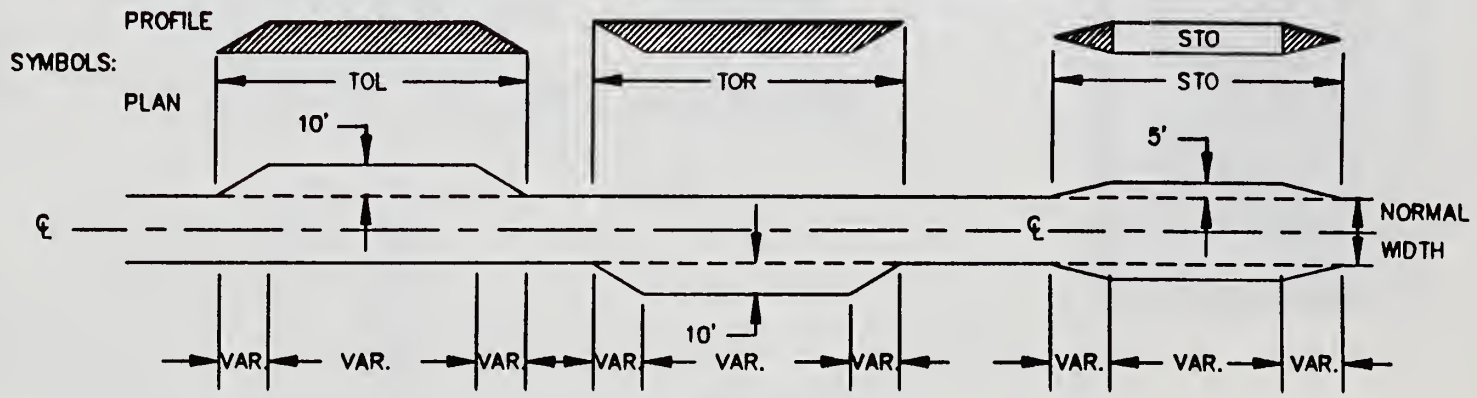
CROWN SUBGRADE 1/4" PER FOOT WIDTH UNLESS OTHERWISE SPECIFIED.

CURVE WIDENING SHALL BE ADDED ON THE INSIDE OF ALL CURVES. WIDENING – DIVIDED BY RADIUS OF THE CURVE IN FEET.

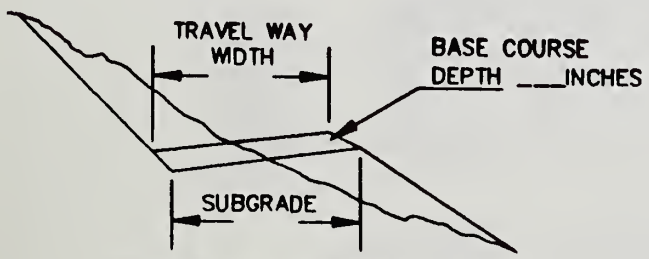


OUTSLOPE SUBGRADE
W/O DITCH, ___ %

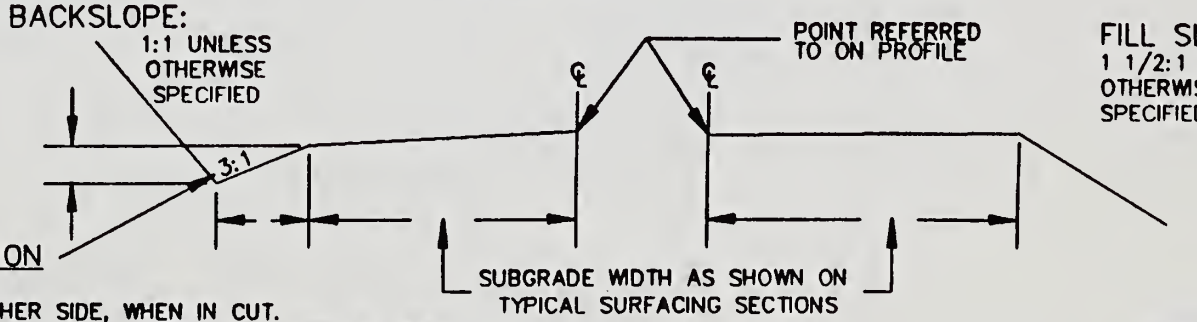
TYPICAL TURNOUT SECTIONS



PLAN VIEW



IN SLOPE SUBGRADE
W/O DITCH, ___ %



TYPICAL DITCH SECTION
DITCH AS SHOWN:
IN CROWNED SECTIONS: EITHER SIDE, WHEN IN CUT.
IN OUTSLOPED SECTIONS: ONLY ON DOWNHILL SIDE, ONLY IN THRU CUT.
IN INSLOPED SECTIONS: NO DITCH, EITHER SIDE.

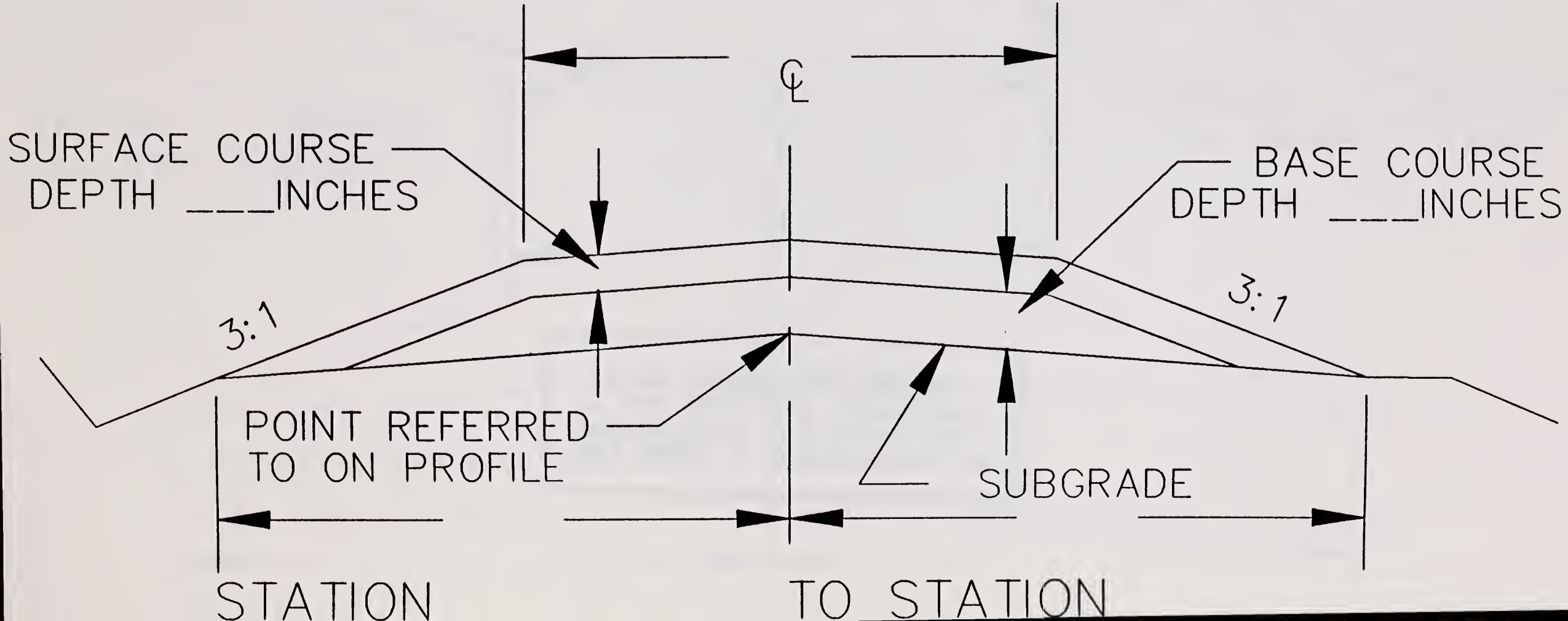
TYPICAL GRADING SECTIONS

W/C [illegible] H. ___ %

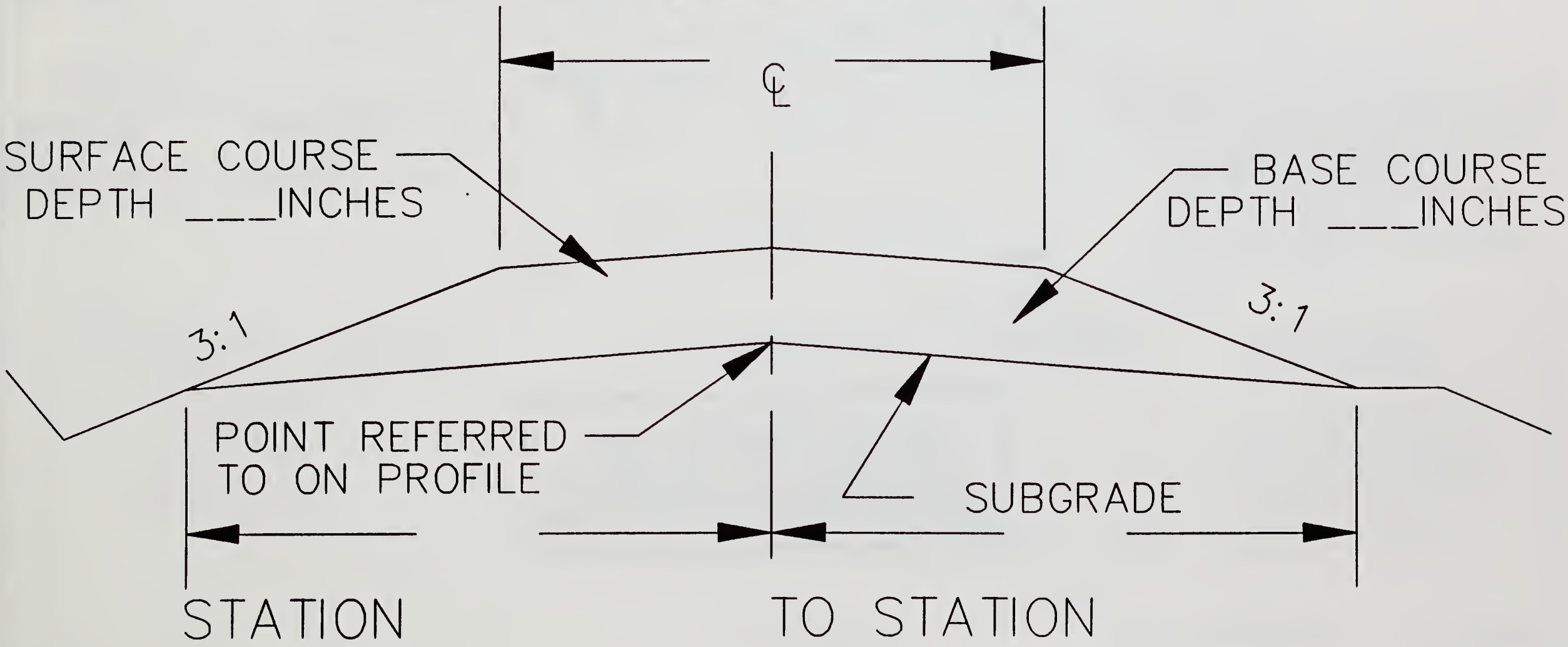
IN OUTSLOPED SECTIONS: [illegible]
IN INSLOPED SECTIONS: NO DITCH, EI[illegible]E.

TYPICAL GRADING SECTIONS

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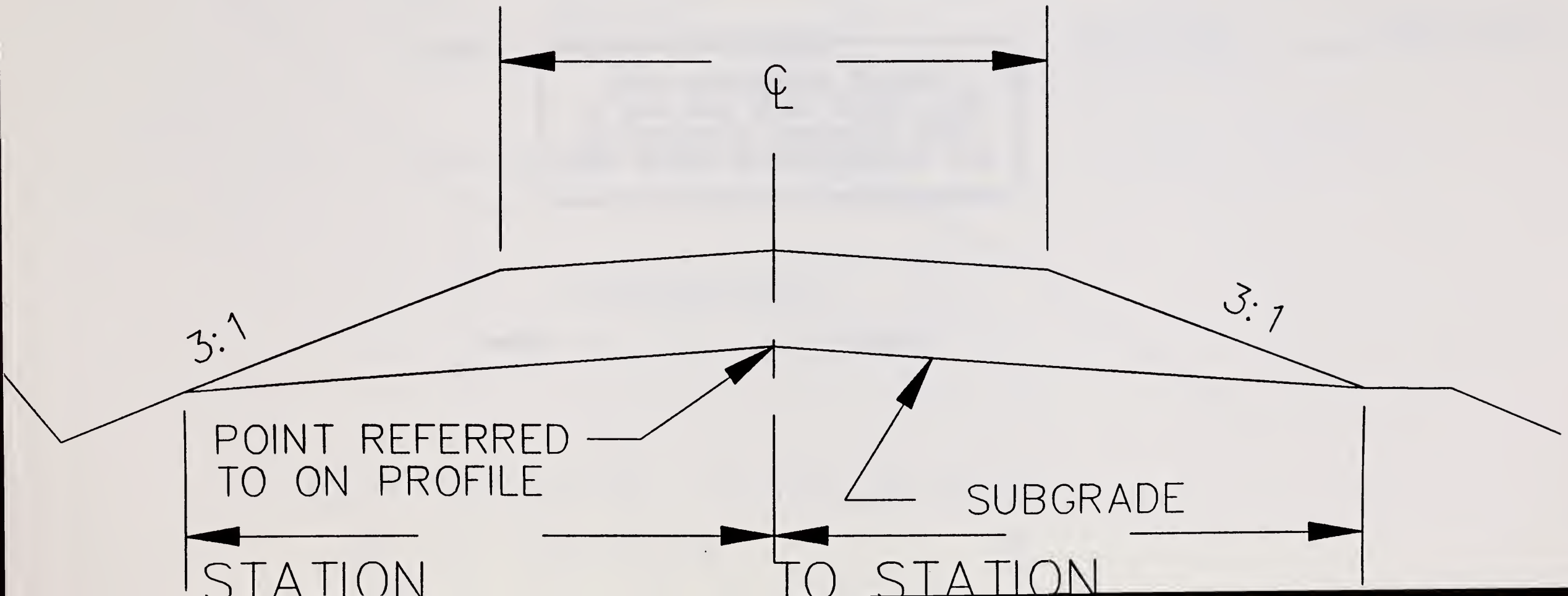
TYPICAL SURFACING SECTIONS

HD000037

TYPICAL SURFACING SECTIONS

HD00037

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GENERAL NOTES

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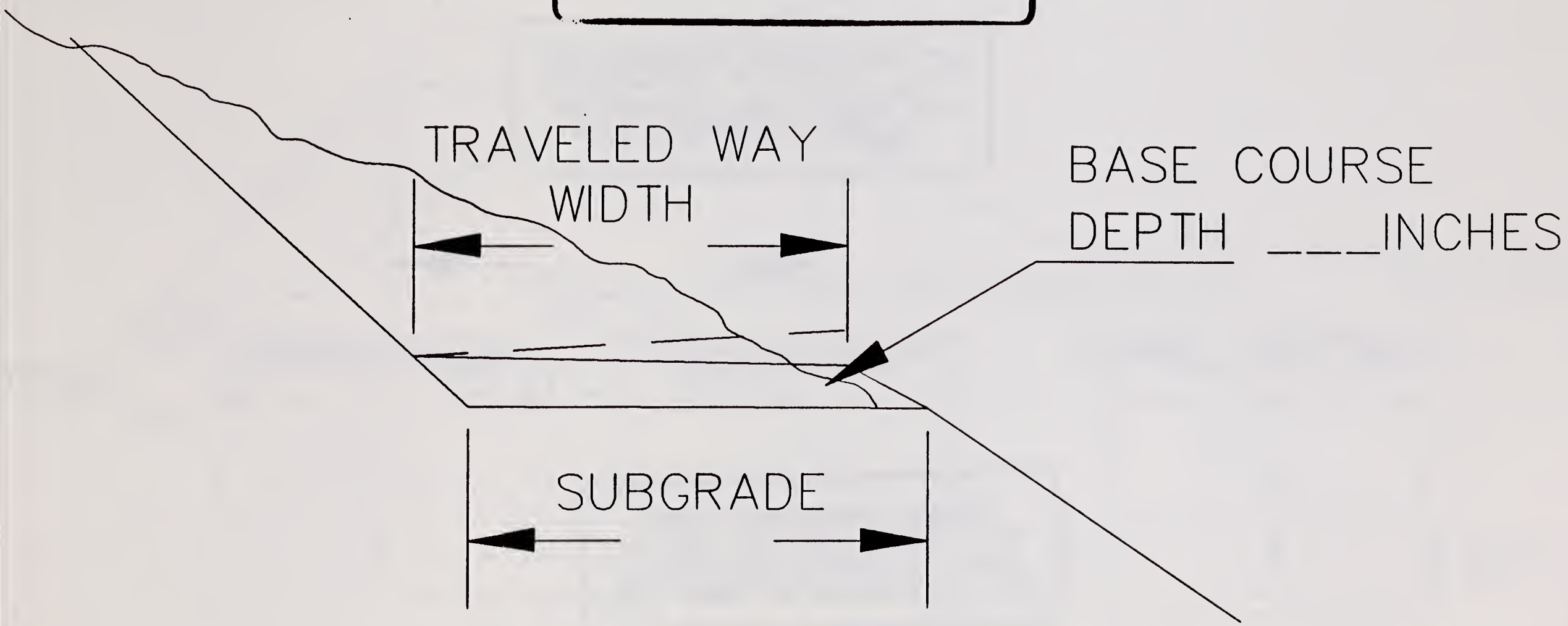
CROWN SUBGRADE 1/4" PER FOOT WIDTH UNLESS OTHERWISE SPECIFIED.

CURVE WIDENING SHALL BE ADDED ON THE INSIDE OF ALL CURVES. WIDENING — DIVIDED BY RADIUS OF THE CURVE IN FEET.

HD0000 34

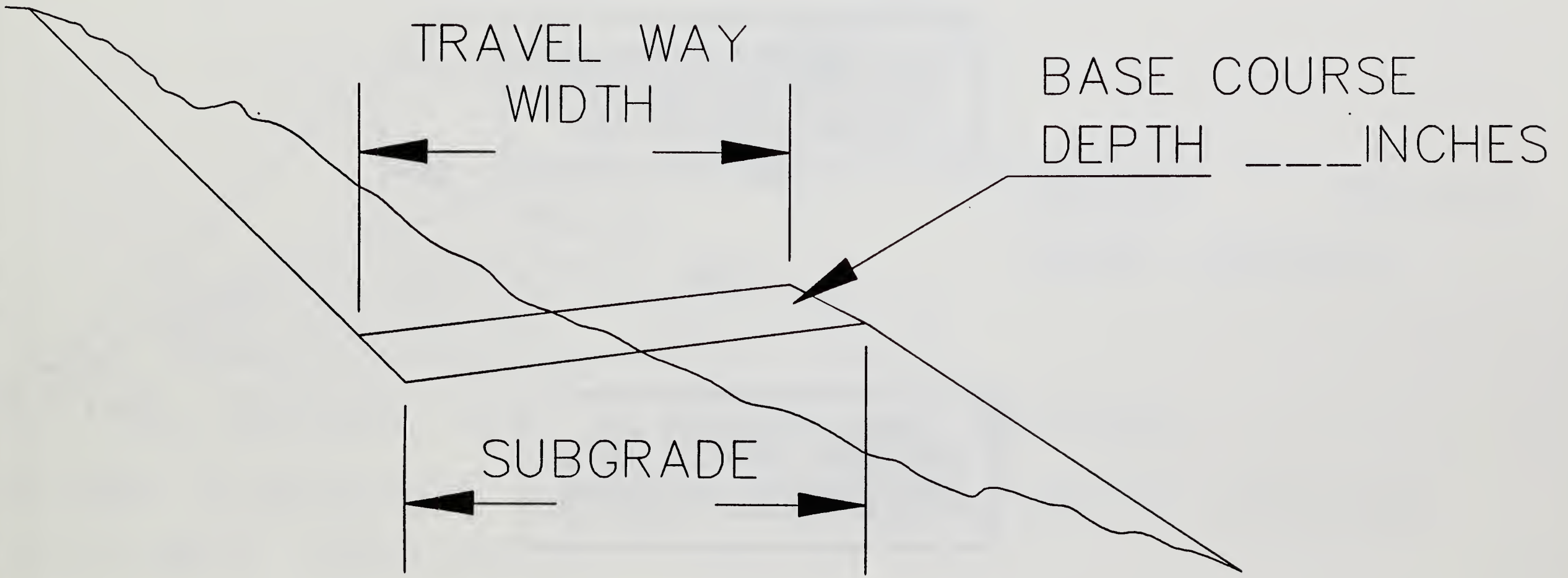
OF THE CURVE IN FEET.

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OUTSLOPE SUBGRADE
W/O DITCH, ___ %

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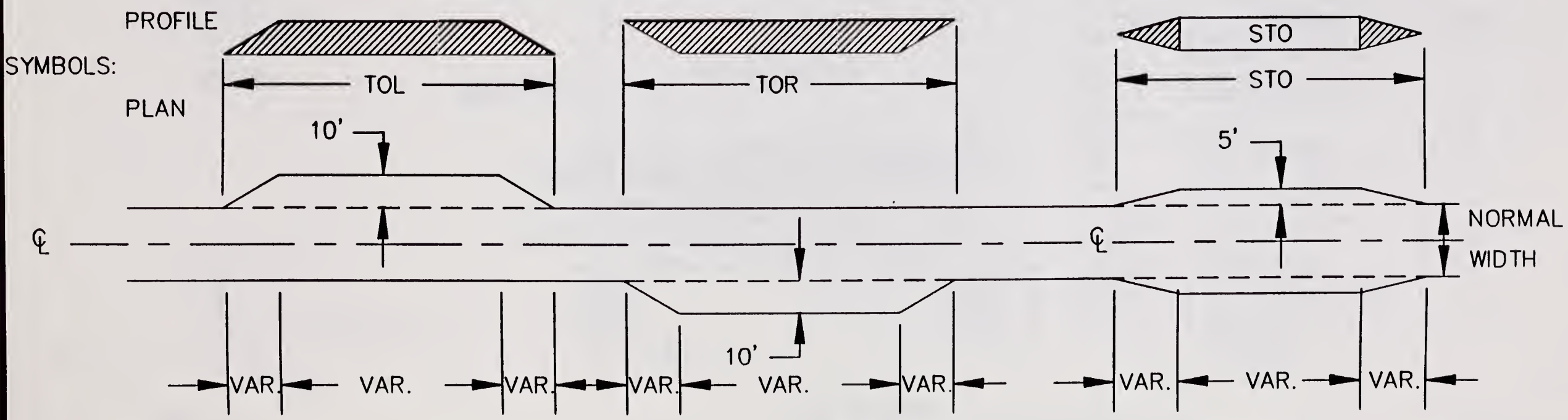
IN SLOPE SUBGRADE
W/O DITCH, __ %

W/ 6 DRAWINGS,

HD0000 36

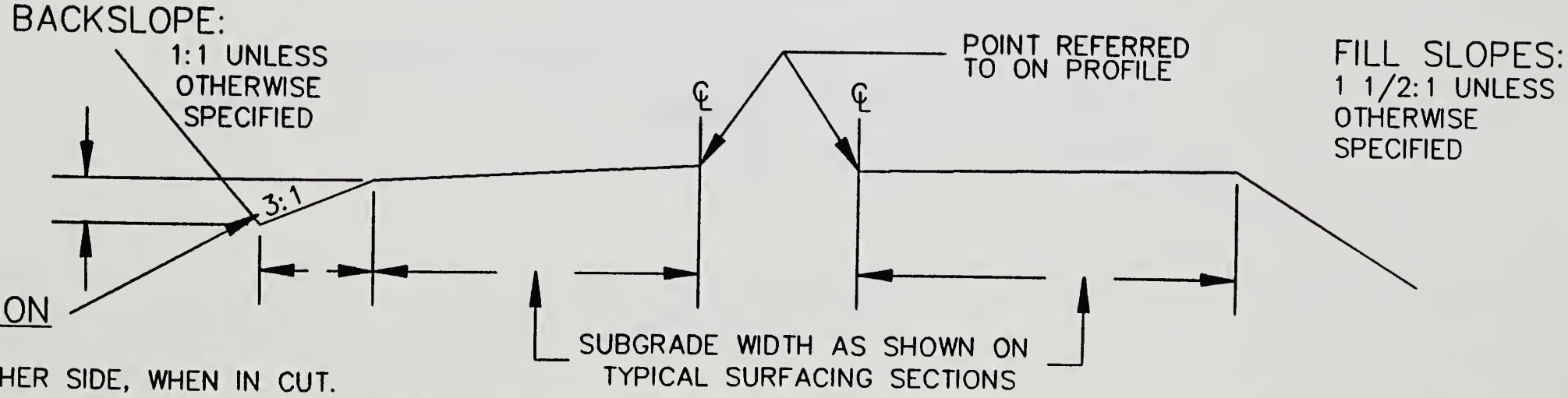
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TYPICAL TURNOUT SECTIONS



PLAN VIEW

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TYPICAL DITCH SECTION

DITCH AS SHOWN:

N CROWNED SECTIONS: EITHER SIDE, WHEN IN CUT.

N OUTSLOPED SECTIONS: ONLY ON DOWNHILL SIDE, ONLY IN THRU CUT.

N INSLOPED SECTIONS: NO DITCH, EITHER SIDE.

TYPICAL GRADING SECTIONS

U Dwg 29

OUTSLOPED SECTIONS: ONLY ON DOWNHILL SIDE. ONE
INSLOPED SECTIONS: NO DITCH, EITHER SIDE.

TYPICAL GRADING SECTIONS

HD000038

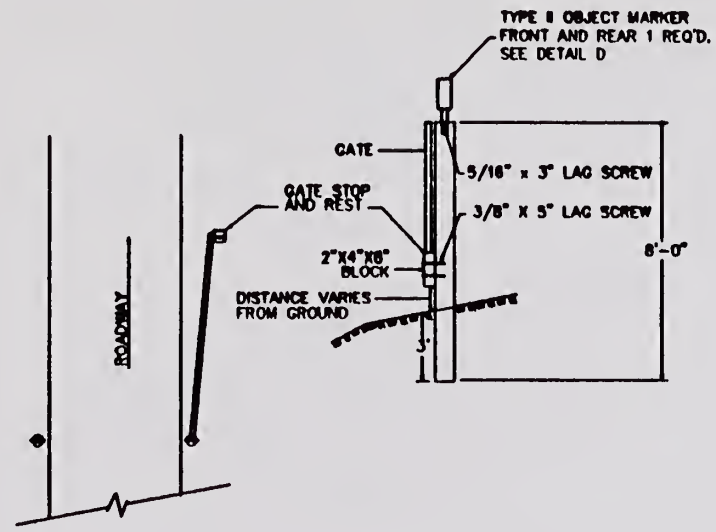
POWDER RIVER GATE OPTION I

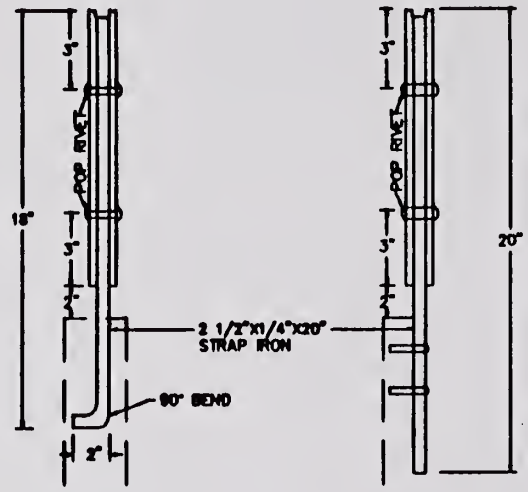
ROAD NUMBER	SHEET NUMBER	TOTAL SHEETS

1. THE GATE SHALL BE "POWDER RIVER" STOCKYARD TYPE OR ITS EQUIVALENT. THE GATE FRAM SHALL BE FABRICATED FROM 1-1/4" HIGH STRENGTH STEEL TUBING (50,000 PSI. MIN. YIELD STRENGTH) THE VERTICAL STAYS SHALL BE HIGH STRENGTH PRESS FORMED 3"X12 GAUGE STEEL (OR EQUAL) ON BOTH FACES. FINISH ON THE GATE AND THE TWO GATE POST SHALL CONSIST OF AT LEAST ONE COAT PRIME AND ONE COAT OF CARK GREEN SURFACE PAINT.
2. ALL BOLTS AND LAG SCREWS SHOWN INCLUDE WASHERS AND NUTS.
3. BARRICATE MARKER PANELS SHALL BE ALUMINUM OVERLAIN WITH "3 M" REFLECTIVE SHEETING WIDE ANGLE FLAT-TOP PRESSURE SENSITIVE, NO. 3260 IMPERIAL WHITE TRANSPARENT "STOP SIGN RED" CODE NO. 712 SHALL BE APPLIED BY SILK SCREEN PROCESSING, AIR BRUSHING OR SPRAYING TO PRODUCE STRIPING, EQUAL PRODUCTS AND PROCESSES MAY BE APPROVED.
4. WOODEN POST AND WOODEN GATE REST SHALL BE TREATED WITH PENTA CHLOROPHENAL WITH MINIMUM NET RETENTION OF 0.5# PER CUBIC FOOT (DRY CRYSTAL).
5. CONCRETE SHALL CONFORM TO SECTION 602-METHOD A, B or C.
7. ALL STEEL MEMBERS EXCEPT LAG SCREWS, CHAIN, GATE, FRAME, REBAR, AND BOLTS SHALL BE A-36.

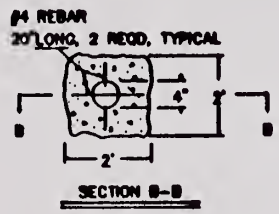
HD000040
12-1-88

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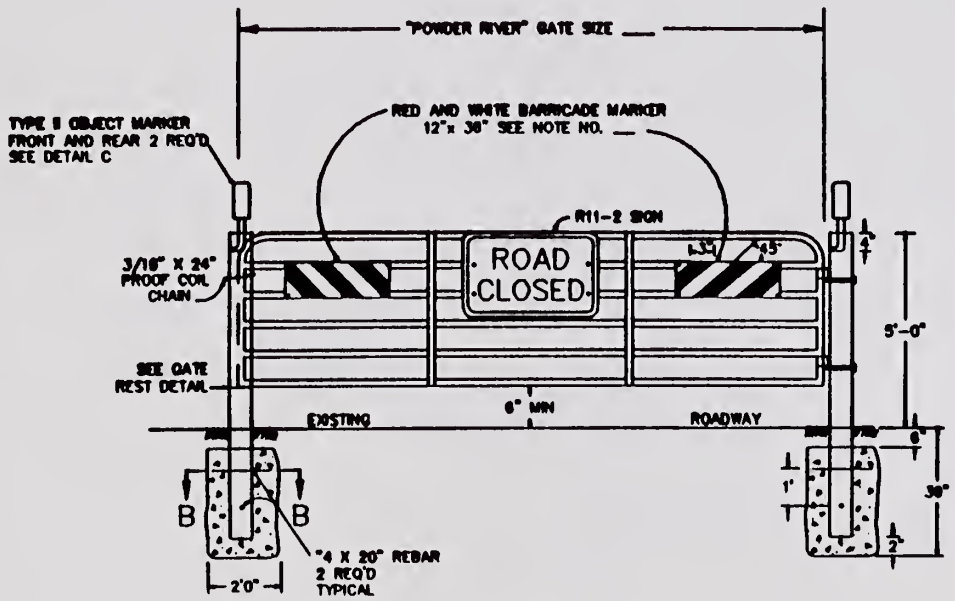


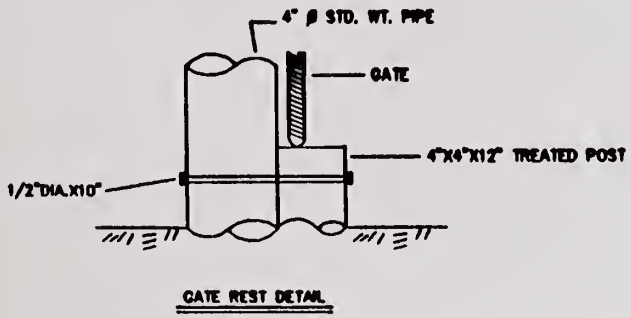


DETAIL C DETAIL D



SECTION B-B





GATE REST DETAIL

	MATERIAL LIST FOR GATE	
ITEM	DESCRIPTION	QUANTITY
BOLT	1/2" DIA. X 10" - FOR GATE REST	1 EA.
BOLTS	5/16" DIA. X 2 1/2" - FOR SIGNS	12 EA.
CHAIN	3/16" PROOF COIL CHAIN 24" LONG	1 EA.
GATE	POWDER RIVER STOCK YARD TYPE	1 EA.
GATE POSTS	4" ø STANDARD WEIGHT PIPE	2 EA.
REBARS	#4 REBAR	4 EA.
SIGN	TYPE II OBJECT MARKER	3 EA.
SIGN	RED AND WHITE BARRICADE MARKER	2 EA.
SIGN	R 11-2	1 EA.
TREATED POST	4" X 4" X 8" TREATED POST	1 EA.
TREATED POST	4" X 4" X 12" TREATED POST	1 EA.
CONCRETE	FOOTINGS	3/4 CU.YD.
LAG SCREW	3/8 ø GALV. 5" LONG	2 EA.
LAG SCREW	5/16 ø GALV. 3" LONG	2 EA.
FIR BLOCK	2" X 4" X 8" GATE SUPPORT (BLOCK)	1 EA.
STRAP IRON	2 1/2" X 1/4" X 20" TYPE II SIGN MOUNTING BRACKET	3 EA.

HD000039
12-1-88

THIS DRAWING WAS PLOTTED AT 1 TO 1

H0000016 12-1-88

	MATERIAL LIST FOR GATE	
ITEM	DESCRIPTION	QUANTITY
BOLT	1/2" DIA. X 10" - FOR GATE REST	1 EA.
BOLTS	5/16" DIA. X 2 1/2" - FOR SIGNS	12 EA.
CHAIN	3/16" PROOF COIL CHAIN 24" LONG	1 EA.
GATE	POWDER RIVER STOCK YARD TYPE	1 EA.
GATE POSTS	4" Ø STANDARD WEIGHT PIPE	2 EA.
REBARS	#4 REBAR	4 EA.
SIGN	TYPE II OBJECT MARKER	3 EA.
SIGN	RED AND WHITE BARRICADE MARKER	2 EA.
SIGN	R 11-2	1 EA.
TREATED POST	4" X 4" X 8' TREATED POST	1 EA.
TREATED POST	4" X 4" X 12" TREATED POST	1 EA.
CONCRETE	FOOTINGS	3/4 CU.YD.
LAG SCREW	3/8 Ø GALV. 5" LONG	2 EA.
LAG SCREW	5/16 Ø GALV. 3" LONG	2 EA.
FIR BLOCK	2" X 4" X 8" GATE SUPPORT (BLOCK)	1 EA.
STRAP IRON	2 1/2" X 1/4" X 20" TYPE II SIGN MOUNTING BRACKET	3 EA.

HD000039
12-1-88

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1. THE GATE SHALL BE "POWDER RIVER" STOCKYARD TYPE OR ITS EQUIVALENT. THE GATE FRAM SHALL BE FABRICATED FROM 1–1/4" HIGH STRENGTH STEEL TUBING (50,000 PSI. MIN. YIELD STRENGTH) THE VERTICAL STAYS SHALL BE HICH STRENGTH PRESS FORMED 3"X12 GAUGE STEEL (OR EQUAL) ON BOTH FACES. FINISH ON THE GATE AND THE TWO GATE POST SHALL CONSIST OF AT LEAST ONE COAT PRIME AND ONE COAT OF CARK GREEN SURFACE PAINT.

2. ALL BOLTS AND LAG SCREWS SHOWN INCLUDE WASHERS AND NUTS.

3. BARRICATE MARKER PANELS SHALL BE ALUMINUM OVERLAIN WITH "3 M" REFLECTIVE SHEETING WIDE ANGLE FLAT–TOP PRESSURE SENSITIVE, NO. 3280 IMPERIAL WHITE TRANSPARENT "STOP SIGN RED" CODE NO. 712 SHALL BE APPLIED BY SILK SCREEN PROCESSING, AIR BRUSHING OR SPRAYING TO PRODUCE STRIPING, EQUAL PRODUCTS AND PROCESSES MAY BE APPROVED.

4. WOODEN POST AND WOODEN GATE REST SHALL BE TREATED WITH PENTA CHLOROPHENAL WITH MINIMUM NET RETENTION OF 0.5# PER CUBIC FOOT (DRY CRYSTAL).

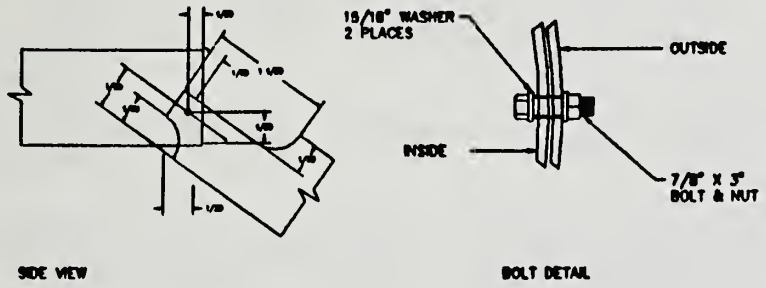
5. CONCRETE SHALL CONFORM TO SECTION 602–METHOD A, B or C.

7. ALL STEEL MEMBERS EXCEPT LAG SCREWS, CHAIN, GATE, FRAME, REBAR, AND BOLTS SHALL BE A–36.

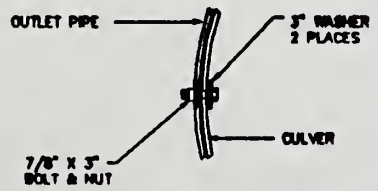
HD000040

12-1-88

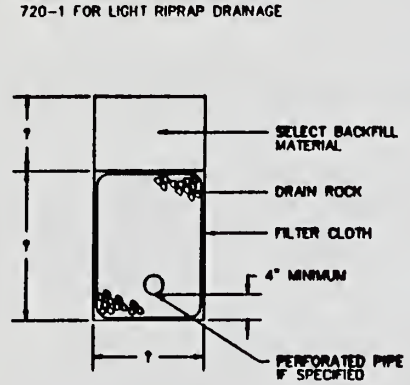
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HINGED ELBOW

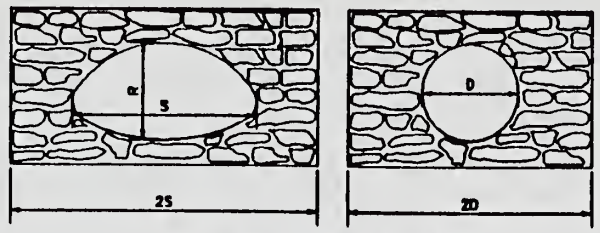


OUTLET PIPE CONNECTION



UNDERDRAIN DETAILS

HD000024 9-2-88

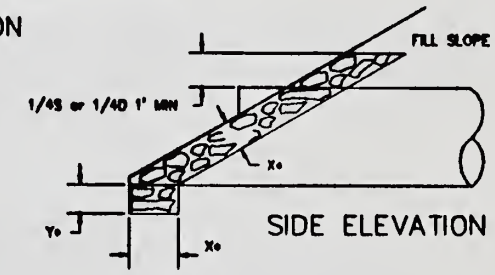


FRONT ELEVATION

NOTE: IN NARROW CHANNELS ADJUST RIPRAP STREAM

*VARIES W/ PIPE D OR S

D OR S	X	Y
18" - 24"	12"	0
30" - 60"	12"	12
60" - 96"	18"	18
MORE THAN 96"	24"	24



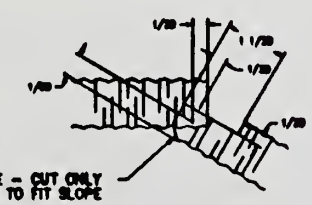
SIDE ELEVATION

GROUTED OR HAND-PLACED RIRRAP HEADWALLS

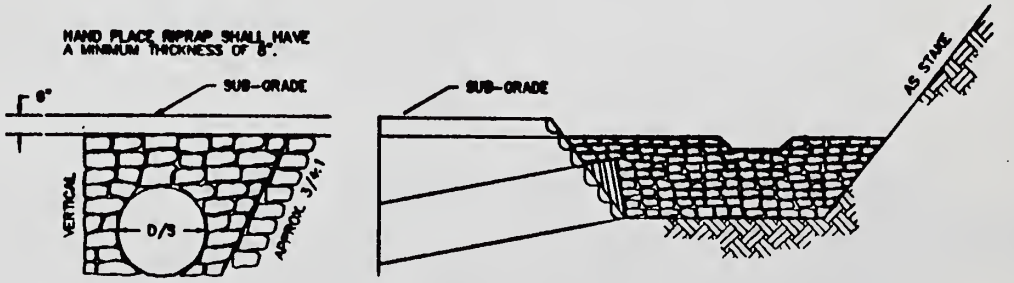
HD000018 9-10-88



HALF CIRCLE OUTLET PIPE CONNECTION

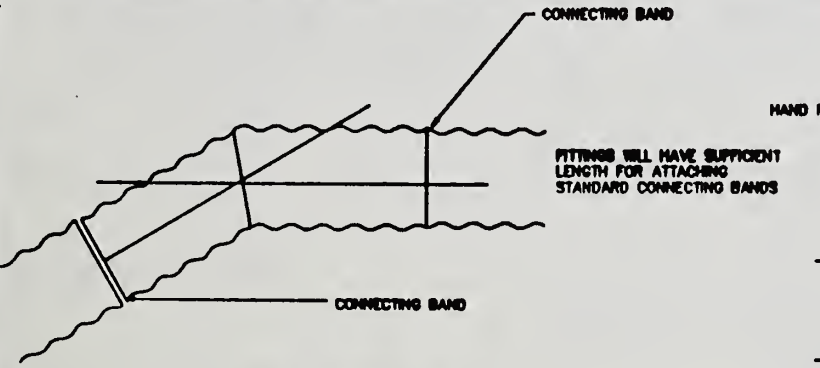


FULL CIRCLE OUTLET PIPE CONNECTION



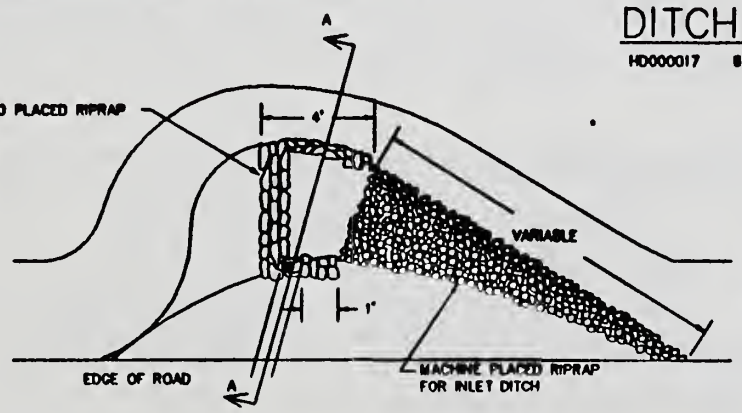
DITCH RELIEF HEADWALL DETAIL

HD000017 8-2-88



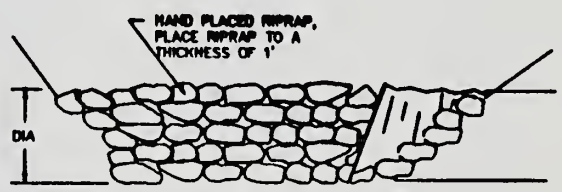
SEE CULVERT LISTING SHEET AND CULVERT CONSTRUCTION DETAILS SHEET FOR SPECIAL ANCHORING.

REGULAR ELBOW



INLET RIPRAP FOR TYPE 2 & 3 INSTALLATION

~~HDE~~ RAP 9-3-88



SECTION A-A

ALL HD BLOCKS IN THIS DRAWING ARE AT A SCALE FACTOR OF 1 TO 1

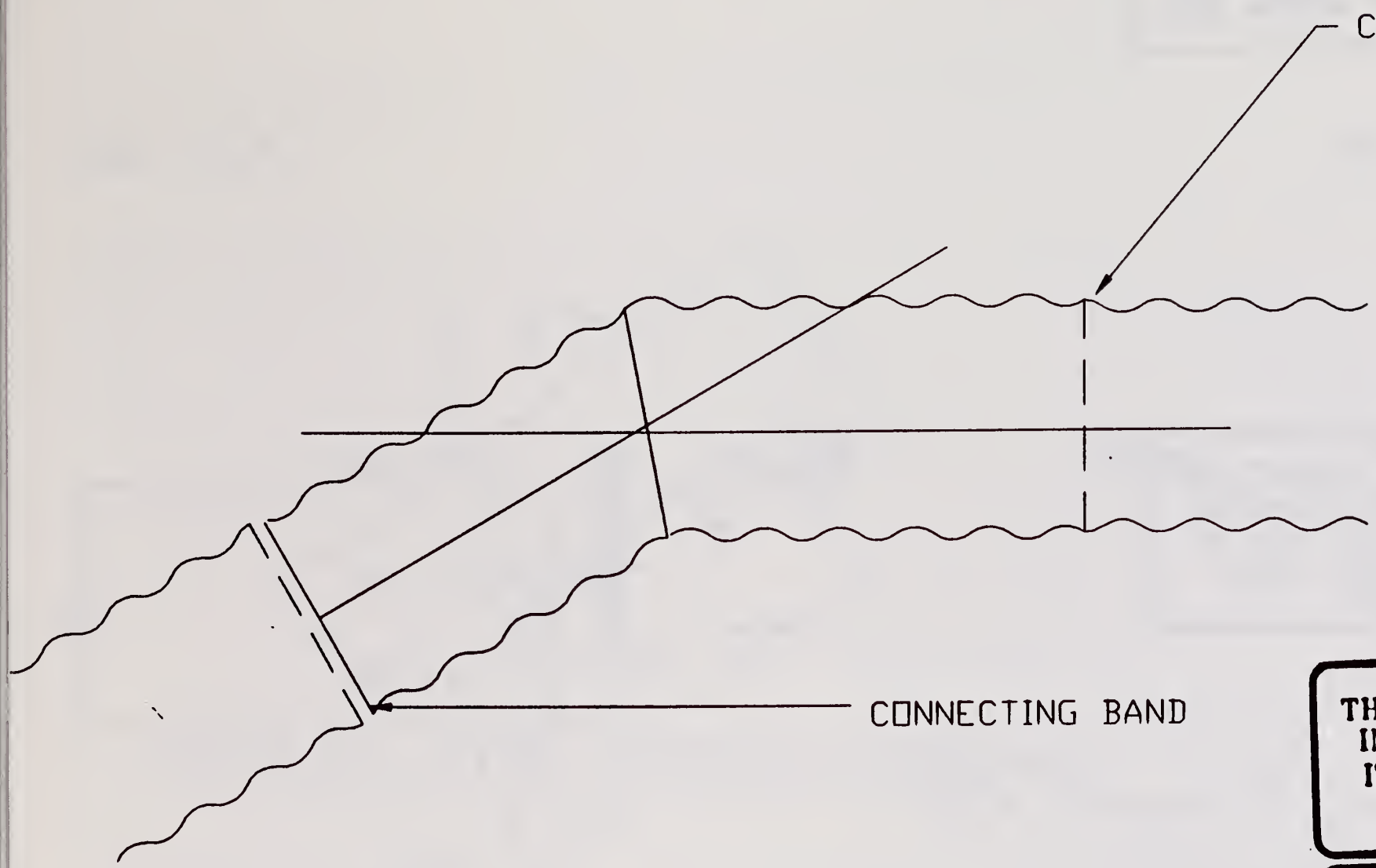
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

DRAWN [illegible] DATE 8-2-88
DESIGNED ____ DATE ____
CHECKED ____ DATE ____
REVIEWED [illegible] DATE 8-10-88

DRAINAGE DETAILS

H0000

SHT. 1
OF 1



FITTINGS WILL HAVE SUFFICIENT LENGTH FOR ATTACHING STANDARD CONNECTING BANDS

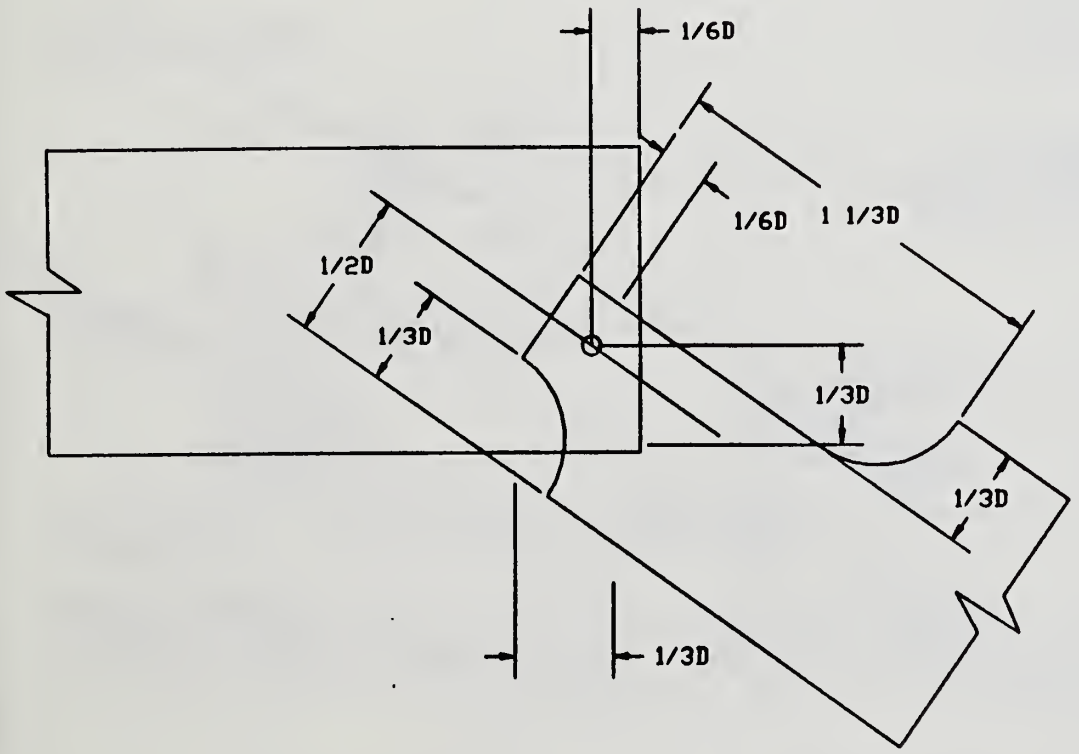
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SEE CULVERT LISTING SHEET AND CULVERT CONSTRUCTION DETAILS SHEET FOR SPECIAL ANCHORING.

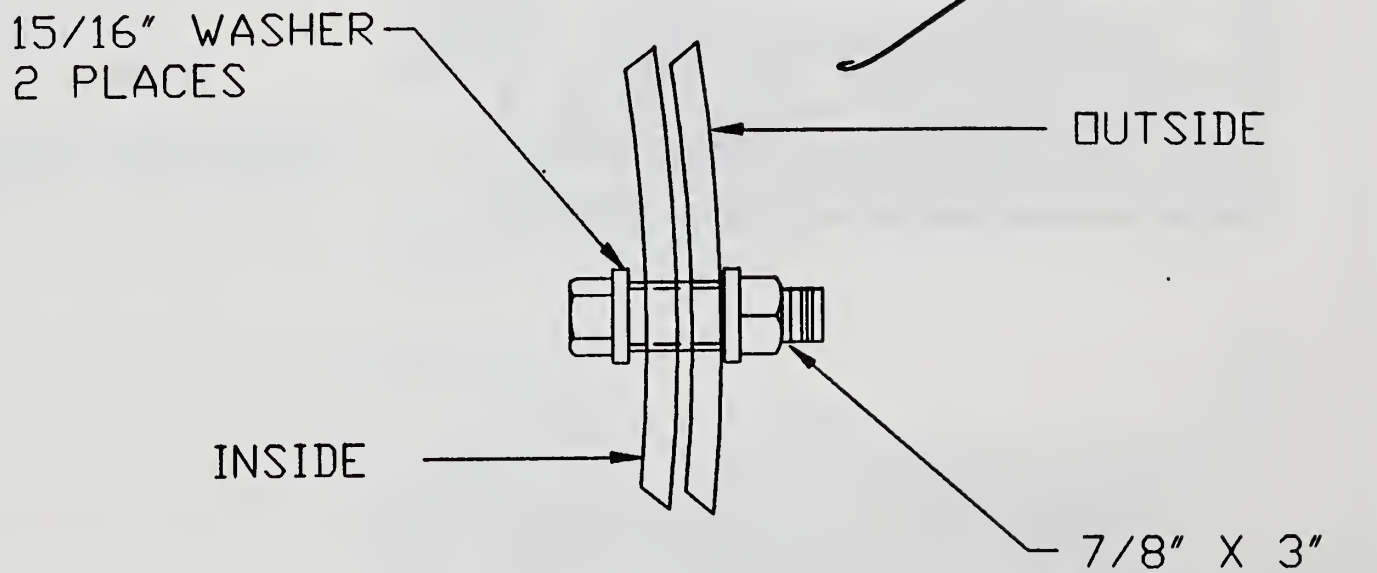
REGULAR ELBOW

HD000015

Simplex Tet is Default



SIDE VIEW

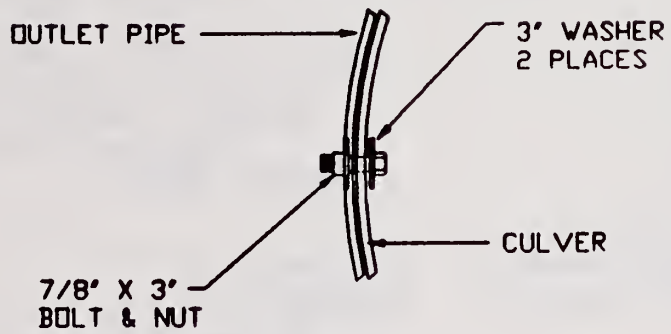


BOLT DETAIL

HINGED ELBOW

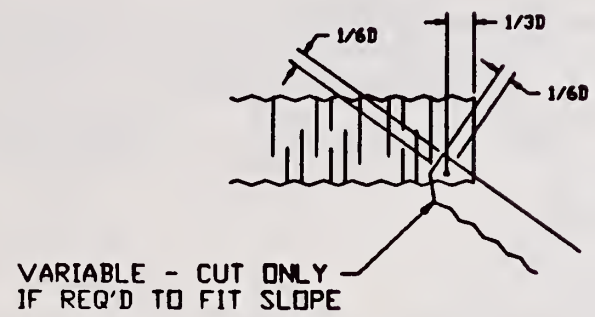
HD 000014

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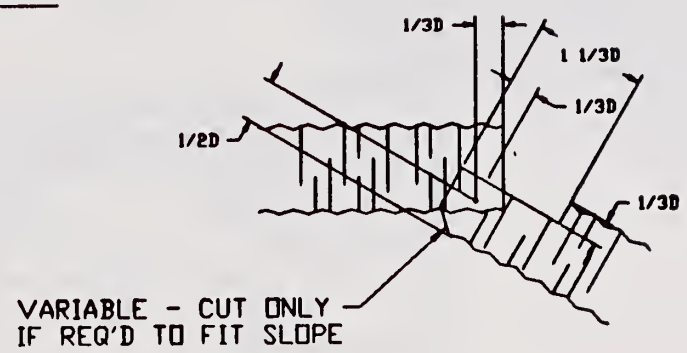


OUTLET PIPE CONNECTION

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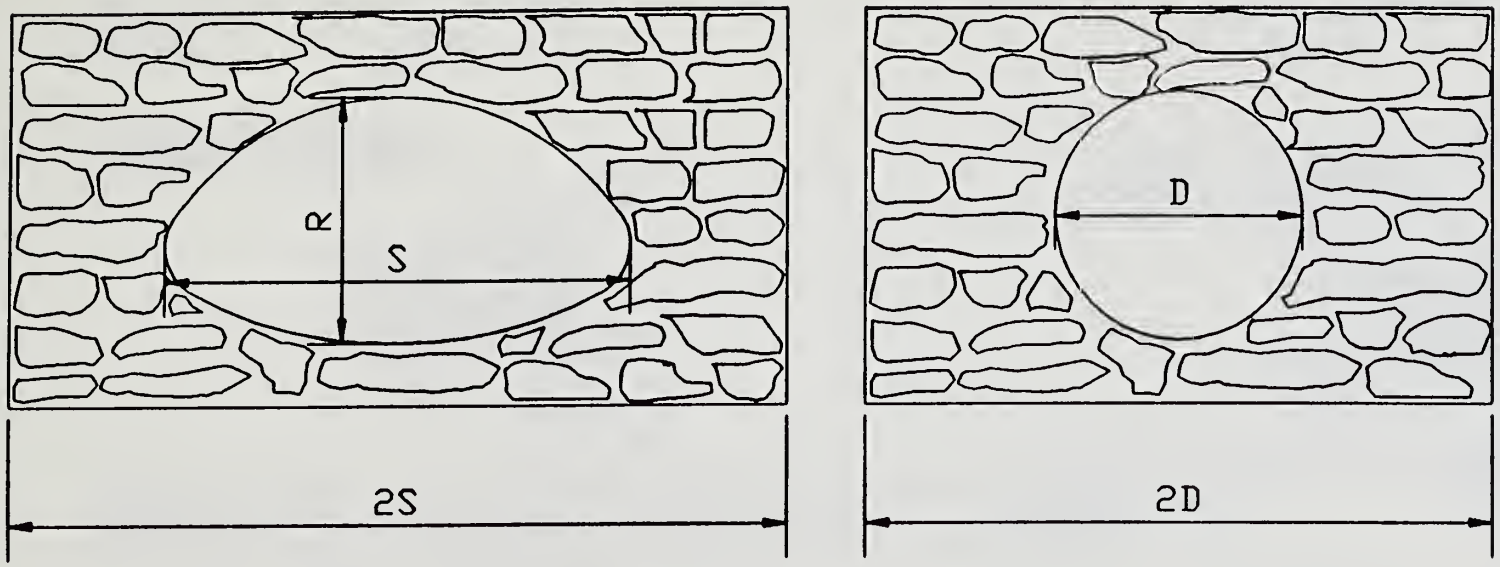


HALF CIRCLE
OUTLET PIPE CONNECTION



FULL CIRCLE
OUTLET PIPE CONNECTION

DCC

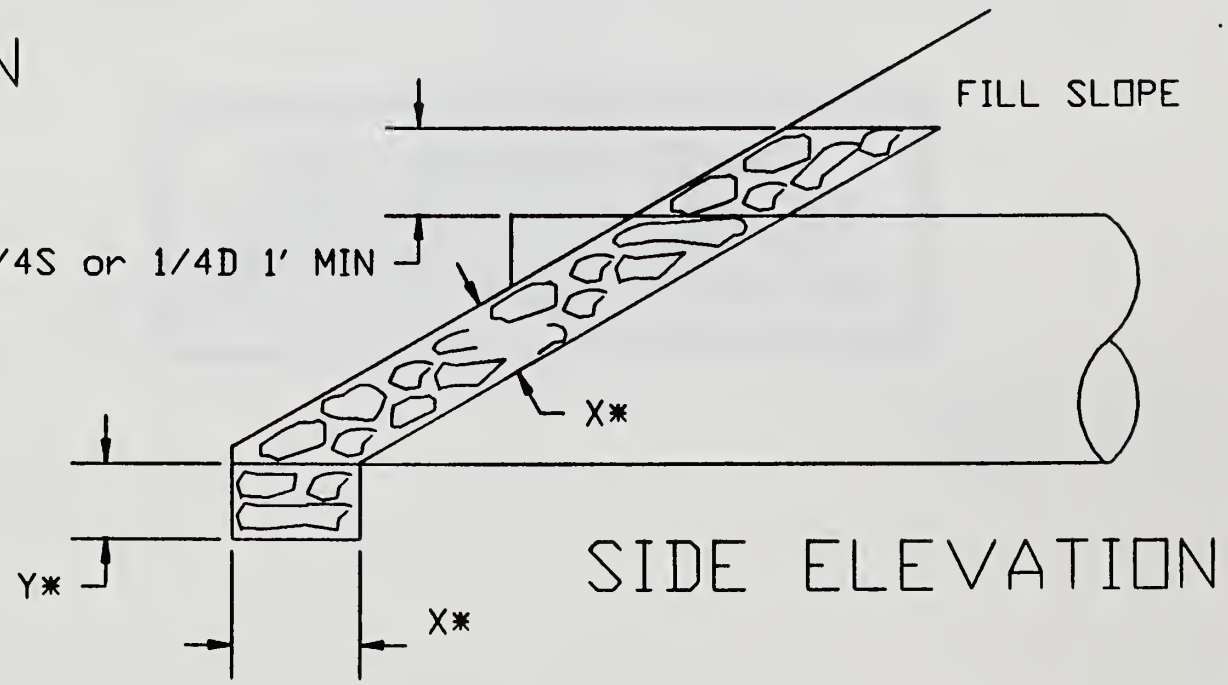


FRONT ELEVATION

NOTE: IN NARROW CHANNELS
ADJUST RIPRAP STREAM

*VARIES W/ PIPE D OR S

D OR S	X	Y
18" - 24"	12"	0
30" - 60"	12"	12
60" - 96"	18"	18
MORE THAN 96"	24"	24



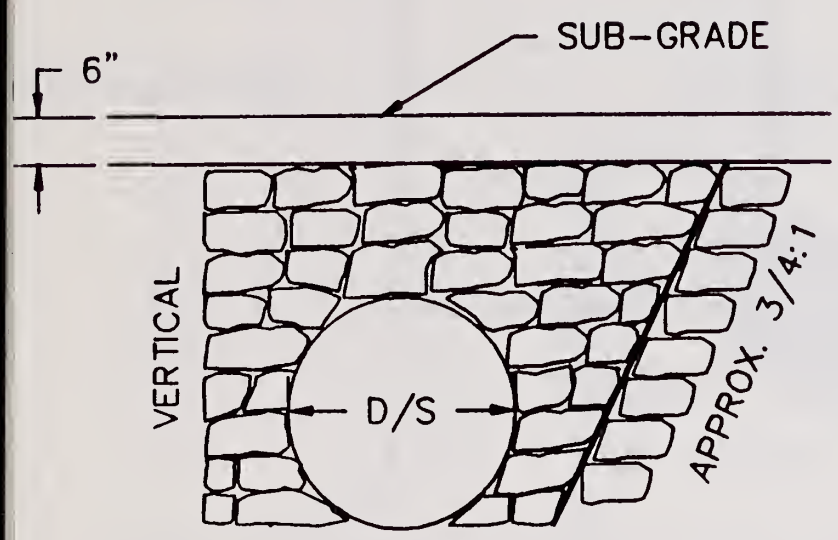
SIDE ELEVATION

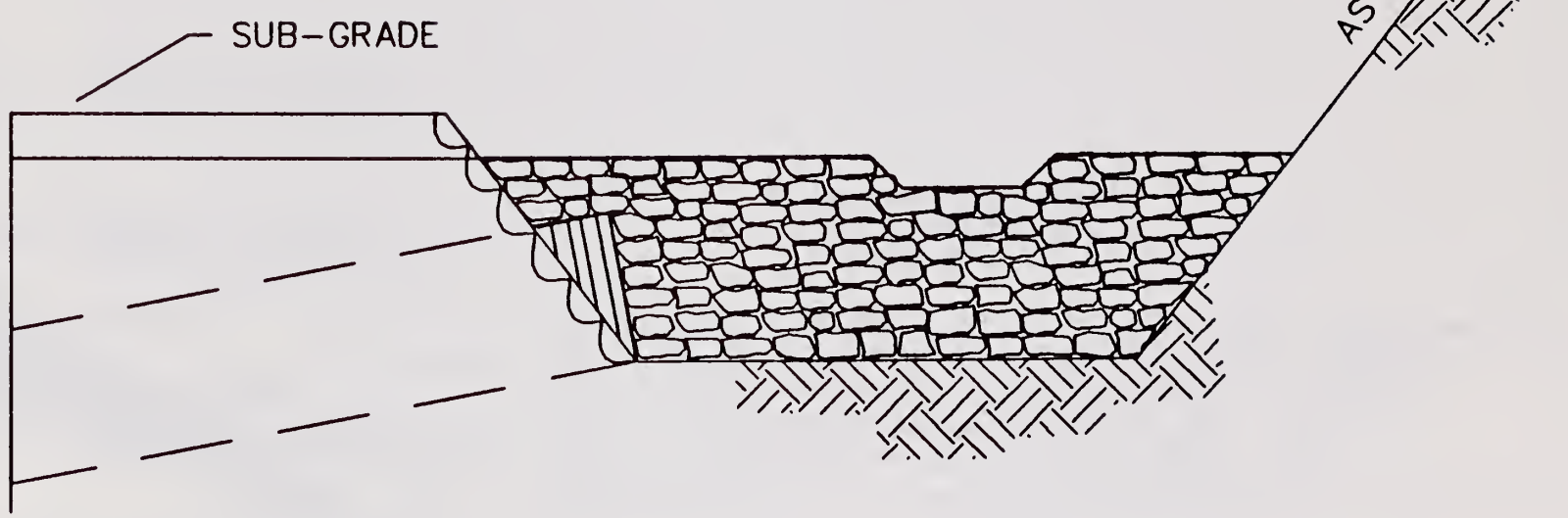
GROUTED OR HAND-PLACED RIRRAP HEADWALLS

HD00001 9-10-88

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HAND PLACE RIPRAP SHALL HAVE
A MINIMUM THICKNESS OF 8".



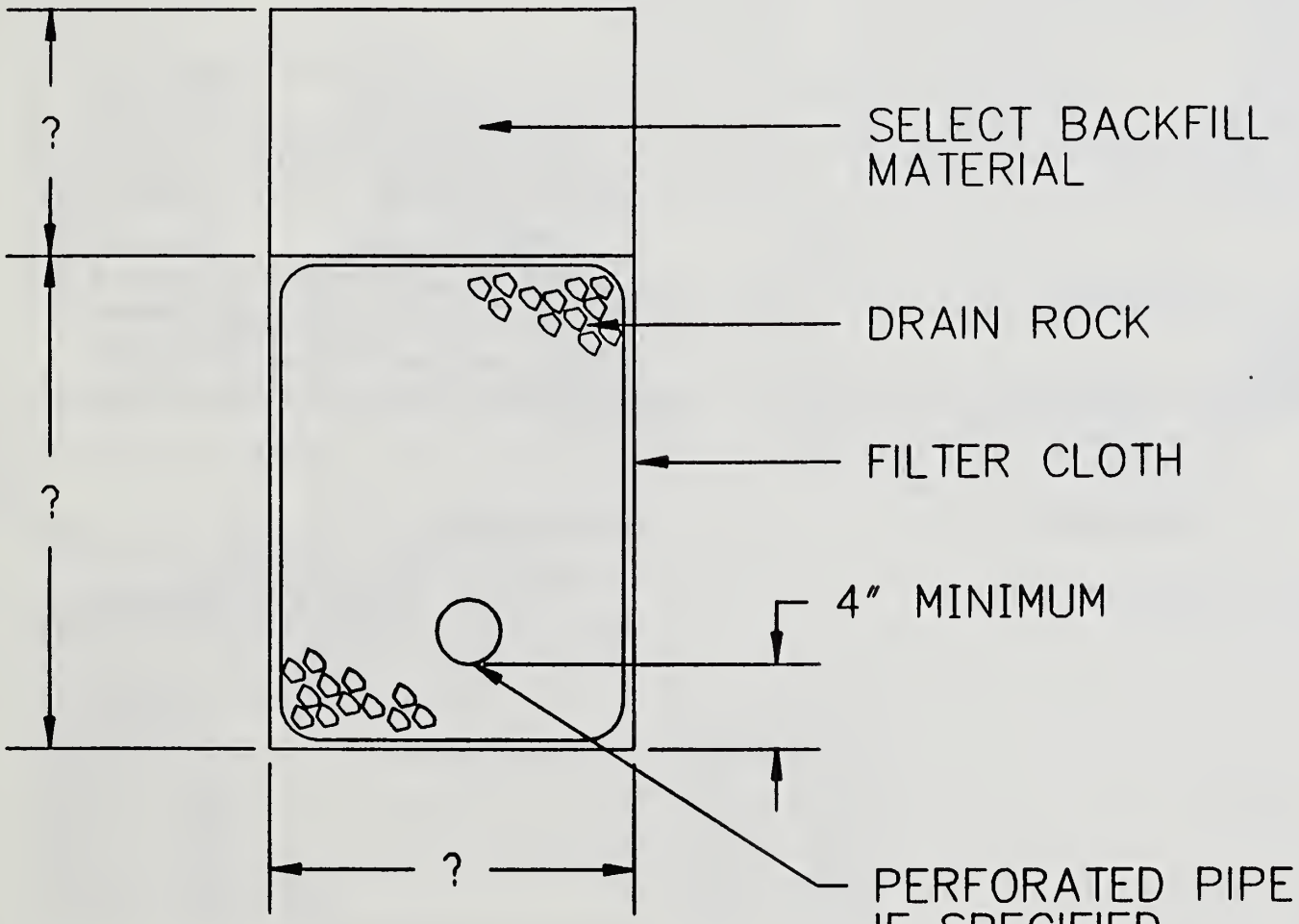


DITCH RELIEF HEADWALL DETAIL

HD000017 9-2-88

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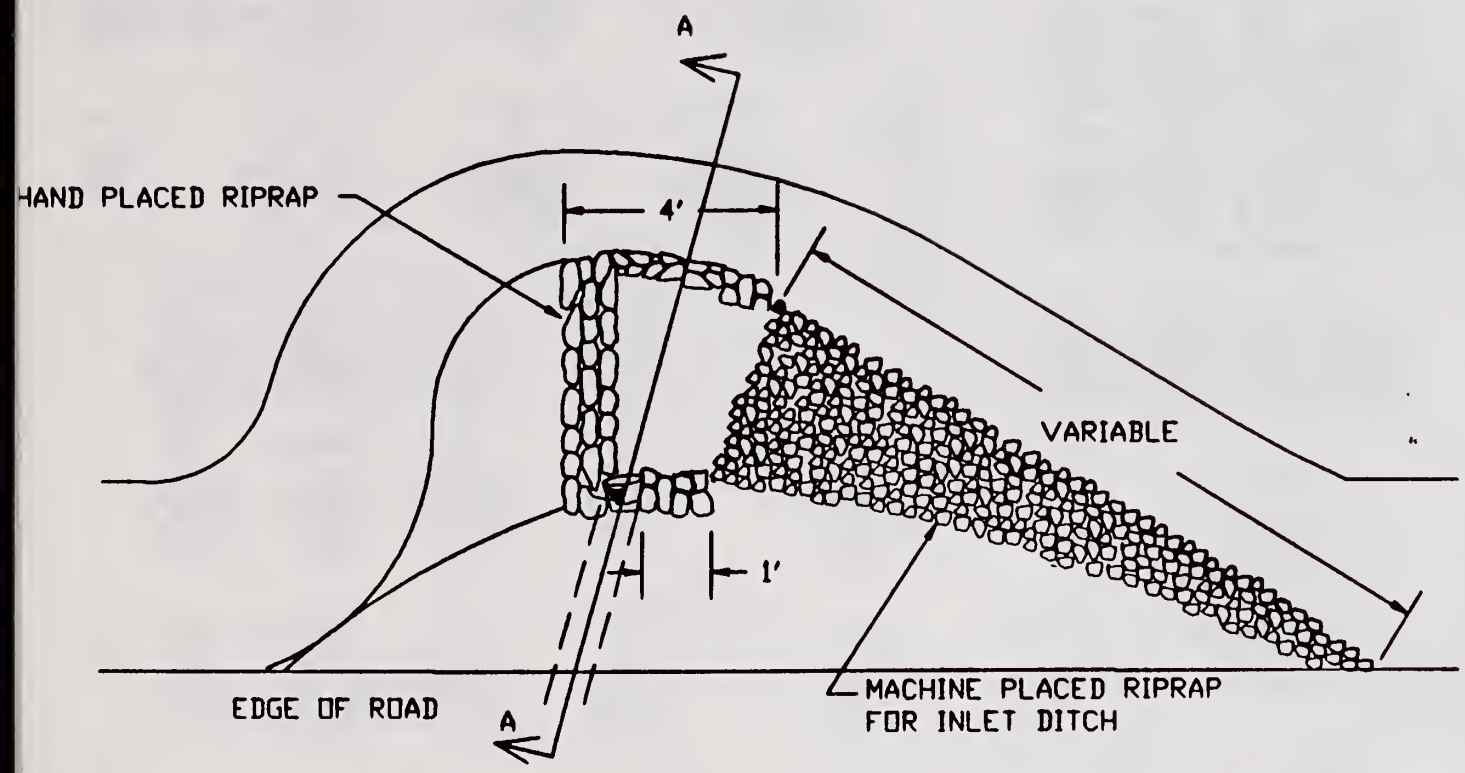
FILTER CLOTH CONFORM WITH TABLE
720-1 FOR LIGHT RIPRAP DRAINAGE



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UNDERDRAIN DETAILS

HD000024 9-2-88





SECTION A-A

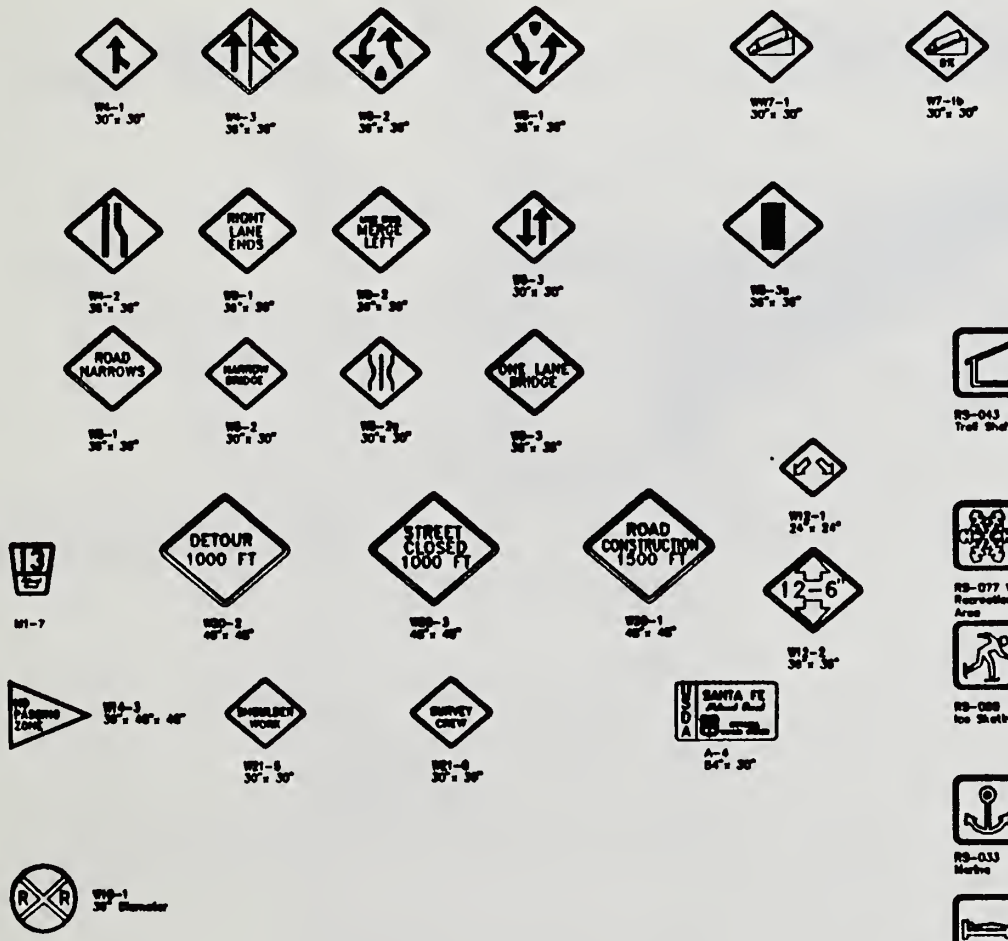
INLET RIPRAP FOR TYPE 2 & 3 INSTALLATION

HDE 9-3-88

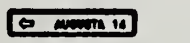
RAP

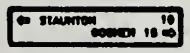
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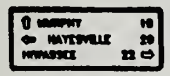


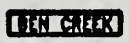


















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U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE THE PACIFIC NORTHWEST REGION	SIGNS–REC–HIWAY
DRAWN DATE DESIGNED DATE CHECKED DATE REVIEWED DATE	H00000 SHT. OF

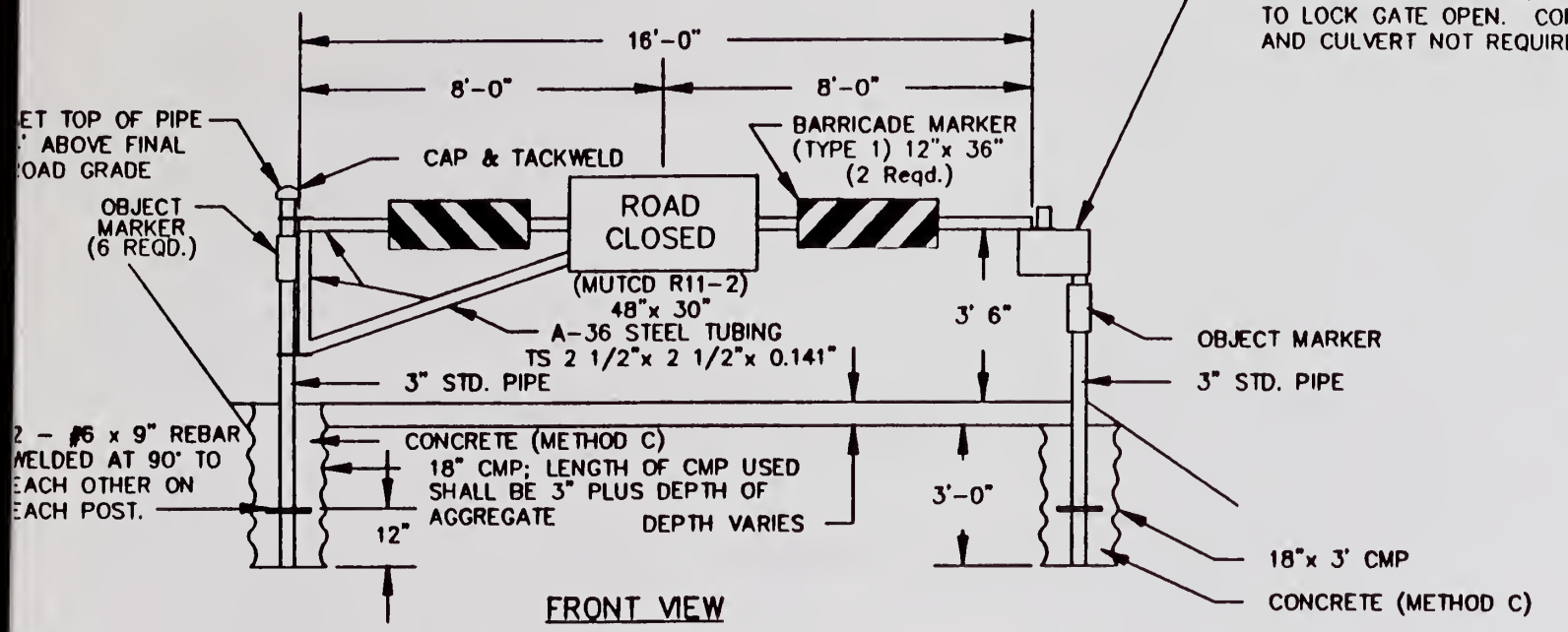
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ALL DRAWINGS, NO SCALE

ROAD NUMBER	SHEET	TOTAL SHEETS

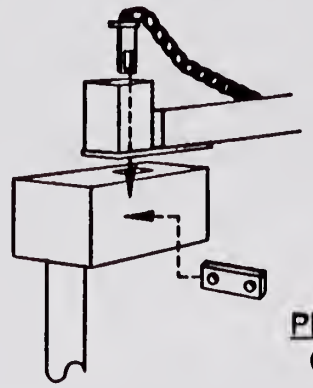
NOTE: A SECOND LOCKING POST ASSEMBLY WILL BE REQUIRED TO LOCK GATE OPEN. CONCRETE AND CULVERT NOT REQUIRED.



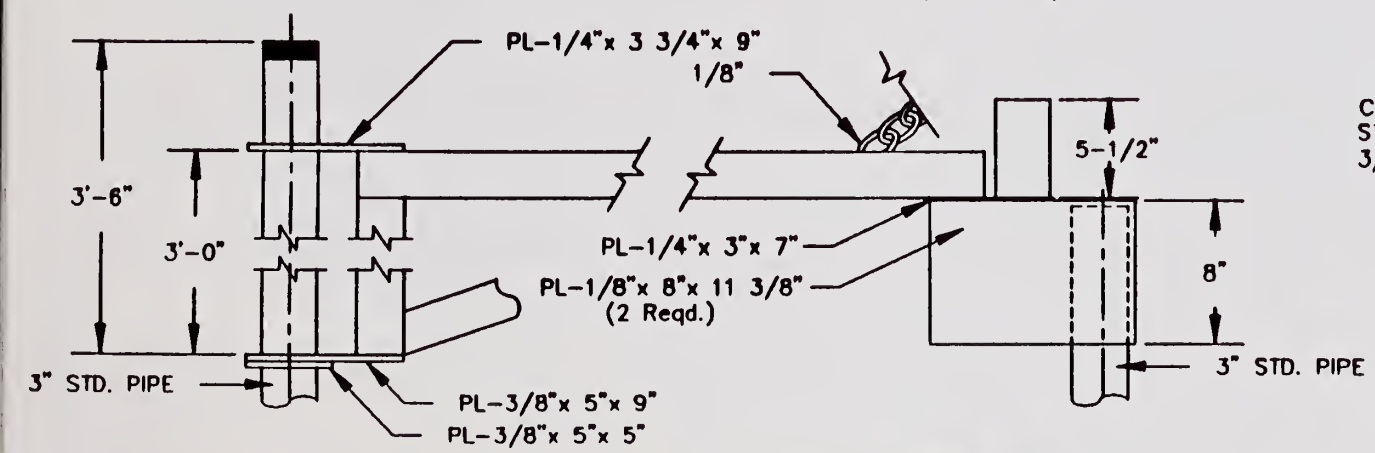
FRONT VIEW

NOTES

1. EXTERIOR ENAMEL SHALL BE TYPE 1, DARK GREEN; UNLESS OTHERWISE APPROVED BY THE ENGINEER.
2. ROAD CLOSED SIGN SHALL MEET MUTCD REQUIREMENTS FOR TYPE R11-2. (1 REQUIRED.)
3. BARRICADE MARKERS SHALL MEET MUTCD REQUIREMENTS FOR TYPE 1. COLOR - BLACK & WHITE. (2 REQUIRED.)
4. OBJECT MARKERS SHALL MEET MUTCD REQUIREMENTS FOR TYPE 2. (6 REQUIRED.)
5. ALL WELDS REQUIRED TO MANUFACTURE GATE, UNLESS OTHERWISE SHOWN, SHALL BE FILLET AND SHALL BE OF THE SAME SIZE AS THE THICKNESS OF THE SMALLER OF THE TWO PIECES BEING JOINED.

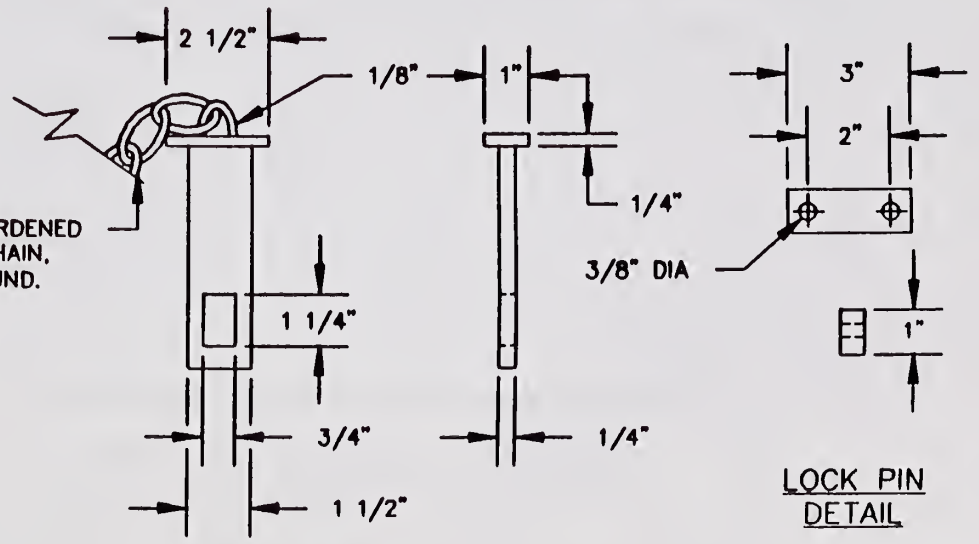


PERSPECTIVE VIEW
(LOCKING ASSEMBLY)



HINGE POST DETAIL

LOCKING POST DETAIL



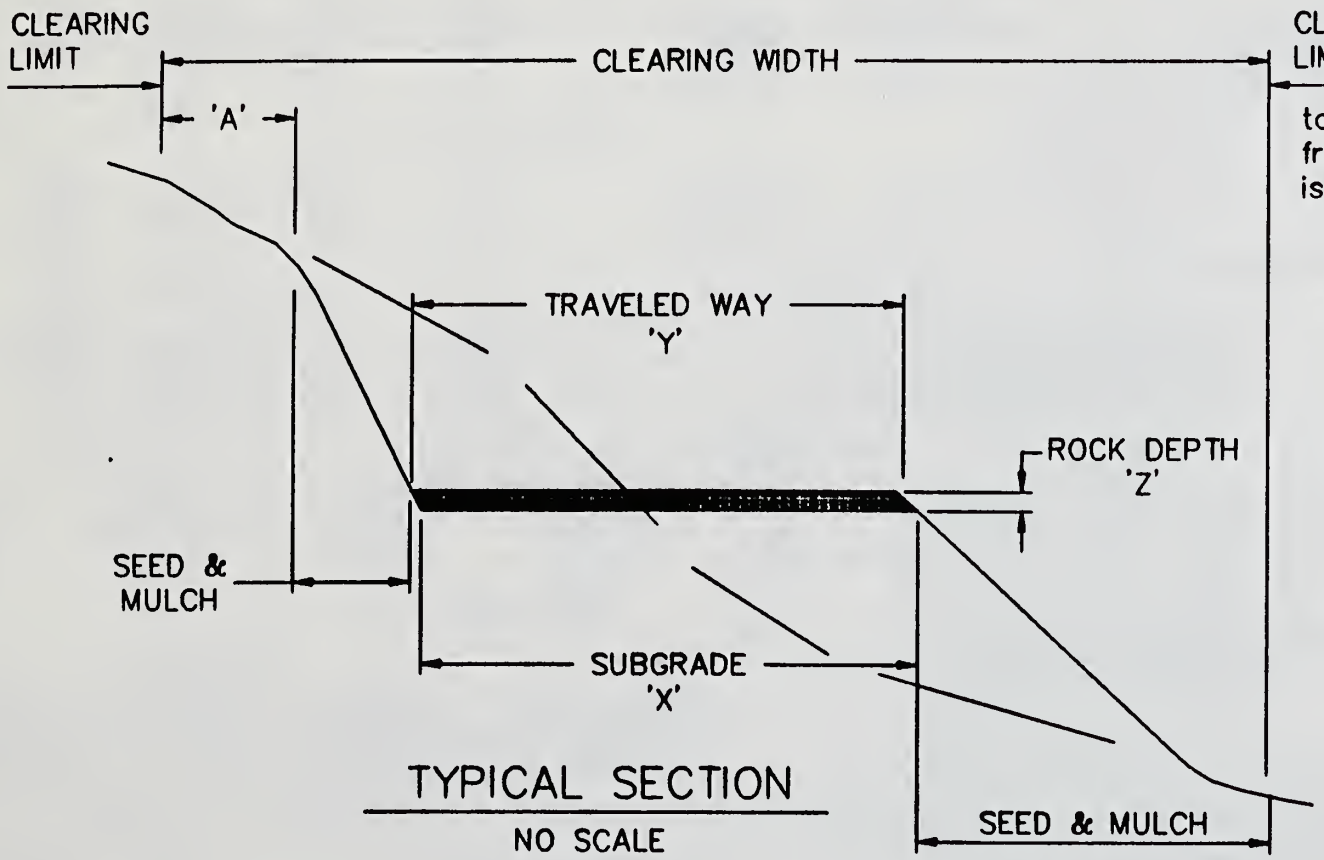
MASTER PIN DETAIL

LOCK PIN
DETAIL

H0000023
9-25-88

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ROAD NUMBER	SHEET NUMBER	TOTAL SHEETS
	1	1



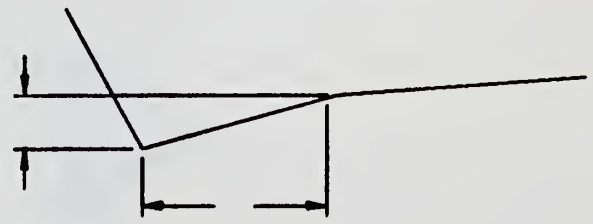
TYPICAL SECTION

NO SCALE

CLEARING LIMIT ....

to toe of fill or 5 ft. from shoulder whichever is greater.

All areas disturbed by construction activities shall be treated in accordance with SECTION 625.

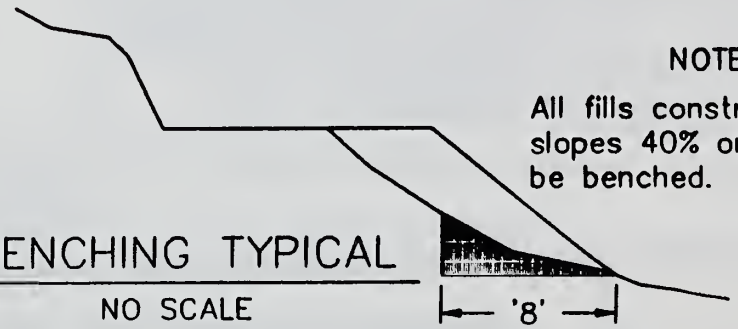


DITCH TYPICAL

NO SCALE

ROAD NUMBER	STATION–STATION	A	$X_{1/}$	Y	Z	TOLERANCE CLASS

1/ unless otherwise staked



BENCHING TYPICAL

NO SCALE

NOTE

All fills constructed on slopes 40% or over will be benched.

H0000084

Mahoning loader 15.7 x 10.7 (highway boss)

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STANDARD HIGHWAY SYMBOLS

		LAYER	COLOR	LINETYPE	LINEWEIGHT
	OTHER PROPOSED PROJECTS	OTHERRD/X	WHITE	CONTINUOUS	1
	DRAIN DIP	DRDIP/X	BLUE	CONTINUOUS	1
	OUTSLOPE SECTION	OUTSIP/X	BLUE	CONTINUOUS	1
	BURNING BAY	BURNBAY/X	RED	CONTINUOUS	1
	LOG DECK AREA	LOGDECK/X	GREEN	CONTINUOUS	1
P	PILING BAY	PILEBAY/X	GREEN	CONTINUOUS	1
B	BURY BAY	BURYBAY/X	GREEN	CONTINUOUS	1
	DITCH	DITCH/X	BLUE	DASHED	1
6"	AGGREGATE (W/DEPTH)	AGG/X	WHITE	HIDDEN	1
18"	AGGREGATE (W/DEPTH) AND FABRIC	AGGFAB/X	WHITE	CONT/HIDDEN	1
	LEADOFF DITCH	LEADOFFD/X	WHITE	CONTINUOUS	1
	PROPOSED BRIDGE	BRIDG-P/X	CYAN	CONTINUOUS	1
	GATE	RDGATE/X	MAGTA	CONTINUOUS	1
1	ROCK SOURCE	ROCKSRC/X	YELLOW	CONTINUOUS	1
	KNOWN HISTORICAL SITE (PROTECT)	HISTSIT/X	YELLOW	CONTINUOUS	1
	TURNOUT RIGHT	TOR/X	WHITE	CONTINUOUS	1
	TURNOUT LEFT	TOL/X	WHITE	CONTINUOUS	1
	TURNAROUNDS	TROUND/X	WHITE	CONTINUOUS	1
	J HOLE	JHOLE/X	WHITE	CONTINUOUS	1
	TURNAROUND	TRND1/X	WHITE	CONTINUOUS	1

COMPILATION CONTROL SYMBOLS

		LAYER	COLOR	LINETYPE	LINEWEIGHT
▲	UNTARGETED PHOTO ID'D IMAGE HORIZONTAL CONTROL POINT OR HORIZONTAL SURVEY MONUMENT LOCATED BY COORDINATES. NOTE ID, SYMBOL = .15"	CONTROL/X	WHITE	CONTINUOUS	1
▲ 2487'	UNTARGETED PHOTO ID'D H/V CONTROL POINT OR HORIZONTAL AND VERTICAL SURVEY MONUMENT LOCATED BY COORDINATES. NOTE ID AND ELEV. SYMBOL = .15"	CONTROL/X	WHITE	CONTINUOUS	1
DISTANCE 999.79' BEARING N25°13'W	BASE LINE - .125" LETTERING	BASELINE/X	WHITE	CONTINUOUS	1
	TARGETED CONTROL SURVEY MONUMENT OR TRIANGULATION STATION. NOTE ID AND ELEVATION. FACE NORTH. .125" LETTERING, SYMBOL = .25"	CONTROL/X	WHITE	CONTINUOUS	1
	UNCONTROLLED GROUND TARGET. NOTE ID. .125" LETTERING, SYMBOL = .15"	UNCTRL/X	WHITE	CONTINUOUS	1
BM X 2575.28'	PERMANENTLY MONUMENTED BENCHMARK (BM) CODED AND MARKED WITH BRASS CAP. .125" LETTERING, SYMBOL = .188"	BENCHMK/X	WHITE	CONTINUOUS	1
TBM X 3245.67'	FIELD ELEVATION - T.B.M. .125" LETTERING, SYMBOL = .25"	TBM/X	WHITE	CONTINUOUS	1
X 2487'	SPOT ELEVATION .125" LETTERING, SYMBOL = .10"	SPOTELV/X	WHITE	CONTINUOUS	1
⊕ 5701	PASS POINTS ON MAP BASE LETTER ONLY CODE NO. ON BASE SIZE = .125" SYMBOL = .125"	PASSPT/X	WHITE	CONTINUOUS	1
⊕ 5701	UNTARGETED PHOTO ID'D IMAGE VERTICAL CONTROL POINT. NOTE ID AND ELEVATION. SYMBOL = .15"	CONTROL/X	WHITE	CONTINUOUS	1

TOPOGRAPHIC EXPRESSION

		LAYER	COLOR	LINETYPE	LINEWEIGHT
80	DEPRESSION CONTOUR TICKS -INDEX CONTOURS	INDXDEP/X	CYAN	CONTINUOUS	1
80	INDEX CONTOUR - .15" LETTERING DOUBLE LINE .25MM APART AT PLOT SCALE	INDEXCT/X	CYAN	CONTINUOUS	1
	INTERMEDIATE CONTOUR	INTERCT/X	RED	CONTINUOUS	1
83	INDEFINITE OR SUPPLEMENTAL CONTOUR - .125" LETTERING	SUPLMCT/X	RED	DASHED	1
	DEPRESSION CONTOUR TICKS -INTERMEDIATE CONTOURS	DEPRES/X	RED	CONTINUOUS	1
	FORM LINE INTERMEDIATE CONTOUR	FORMCT/X	RED CYAN	DASHED	1
80	FORM LINE INDEX CONTOUR .15" LETTERING. DOUBLE LINE .25MM APART AT PLOT SCALE	FRMINDX/X	CYAN	DASHED	1

STANDARD COMPILATION SYMBOLS

		LAYER	COLOR	LINETYPE	LINEWEIGHT
	BUILDING - (CROSSHATCH AT 45°)	BUILDIN/X	MAGTA	CONTINUOUS	1
	HEDGE	VEG/X	GREEN	CONTINUOUS	1
O O O O TYPE TYPE TYPE TYPE	UTILITY COVERS	UTILCOV/X	CYAN	CONTINUOUS	1
	CATCH BASIN	CATBASL/X	CYAN	CONTINUOUS	1
	DROP INLET	DROPINL/X	BLUE	CONTINUOUS	1
	UTILITY POLE	UTILPOL/X	RED	CONTINUOUS	1
	UTILITY AND LIGHT POLE	UTILLGT/X	RED	CONTINUOUS	1
	LIGHT POLE	LGTPOLE/X	RED	CONTINUOUS	1
	FIRE HYDRANT	FIREHYD/X	BLUE	CONTINUOUS	1
TL	TRAFFIC LIGHT	TRAFLGT/X	RED	CONTINUOUS	1
	CULVERT	CULVERT/X	CYAN	CONTINUOUS	1
	GUARD RAIL WITH STEEL SIDES	GRAILSS/X	CYAN	CONTINUOUS	1
	FENCE ON WALL	FENCEOW/X	CYAN	CONTINUOUS	1
	BILLBOARDS	BILLBDR/X	CYAN	CONTINUOUS	1
	TRAFFIC TREADLES	TRAFFTR/X	CYAN	CONTINUOUS	1
CB	CALL BOX	CALLBOX/X	RED	CONTINUOUS	1
	TOWERS	TOWERS/X	WHITE	CONTINUOUS	1
	SIDEWALK ELEVATORS	SIDEWEL/X	YELLOW	CONTINUOUS	1
	CATENARY POLE (W/UTILITIES)	CATPOLE/X	MAGTA	CONTINUOUS	1
	CATENARY POLE (WO/UTILITIES)	CATPOLE/X	MAGTA	CONTINUOUS	1
S	STEAM LINES (ABOVE GRD.)	STMLINE/X	MAGTA	CONTINUOUS	1
A	AIR LINES (ABOVE GRD.)	AIRLINE/X	CYAN	CONTINUOUS	1
W	WATER LINES (ABOVE GRD.)	WATERLN/X	BLUE	CONTINUOUS	1
E	POWER LINES	PWRLINE/X	RED	CONTINUOUS	1
O O O WM GM EM	METERS	METERS/X	RED	CONTINUOUS	1
	RAILROAD SWITCH	RRSWTCH/X	RED	CONTINUOUS	1
19+00	ROAD STATION POINT	RRSTAPT/X	CYAN	CONTINUOUS	1

STANDARD COMPILATION SYMBOLS

		LAYER	COLOR	LINETYPE	LINEWEIGHT
	FOOTBRIDGE	FOOTBRG/X	WHITE	CONTINUOUS	1
	IMPROVED ROAD PLOT TO SCALE	IMP-RDS/X	WHITE	CONTINUOUS	1
	TRAIL	TRAIL/X	WHITE	CONTINUOUS	1
	UNIMPROVED ROAD OR JEEP TRAIL. PLOT TO SCALE	UNIMPRD/X	WHITE	CONTINUOUS	1
	BRIDGE, TO SCALE INCLUDING WING ABUTMENT (SPOT ELEVATION AT EACH END ON SPOTELV LEVEL)	BRIDGE/X	CYAN	CONTINUOUS	1
	RAILROAD, TO SCALE ON LARGE SCALE MAPS (FROM 1"=20' TO 1"=200')	RAIL/X	WHITE	CONTINUOUS	1
	RAILROAD, SMALL SCALE MAPS (SMALLER THAN 1"=200')	RAIL/X	WHITE	CONTINUOUS	1
	POLE OR WIRE FENCE SHOW GATES TO SCALE "X" APPROXIMATELY 2/32" IN LENGTH	FENCE/X	MAGTA	CONTINUOUS	1
	CATTLE GUARD TO SCALE	CATTLEG/X	MAGTA	CONTINUOUS	1
	POLE, MAST OR SNAG, 1/32" POLE SIZE TO SCALE IF LARGER	POLE/X	MAGTA	CONTINUOUS	
WALL CURB	CURB,RETAINING WALL-LABEL PROPORTION LINE SIZE ACCORDINGLY	WALCURB/X	YELLOW	CONTINUOUS	1
	SIDEWALK TO SCALE	SIDWALK/X	YELLOW	DASHED	1
	TABLE- DRAW TO SCALE	TABLE	YELLOW	DASHED	1
	FIRE GRATE OR STOVE	FIREGAT/X	RED	CONTINUOUS	1
	SEAT - LABLE KIND	SEAT	YELLOW	CONTINUOUS	1
	SIGN-INFORMATIONAL DIRECTIONAL,ECT. LABEL TYPE WHERE POSSIBLE	SIGNS/X	YELLOW	CONTINUOUS	1
	LOG BARRIER-SHOW TO SCALE	LOGBAR/X	YELLOW	CONTINUOUS	1
	STUB BARRIER - CONCRETE, WOOD OR ROCK. SHOW TO SCALE	STUBBAR/X	YELLOW	CONTINUOUS	1
DITCH	IRRIGATION DITCH - SHOW DIRECTION OF FLOW	DITCH/X	BLUE	CONTINUOUS	1
	FLUME	FLUME/X	BLUE	DASHED	1
WELL	WELL .07" DIA.	WELL/X	BLUE	CONTINUOUS	1
	SHAFT - TUNNEL ENTRANCE	TUNNEL/X	RED	CONTINUOUS	1
	SMALL MASONRY DAM OR CREST OF EARTH DAM, DOUBLE LINE .25MM APART	SMDAM	CYAN	CONTINUOUS	1
	FOUNDATION OR CONCRETE SLAB - LABEL	FDATION/X	YELLOW	CONTINUOUS	1
	TENT SPACE	CAMPING/X	GREEN	CONTINUOUS	1
	LARGE MASONRY DAM TO SCALE	LGDAM	CYAN	CONTINUOUS	1
TANK	TANK-SHOW TYPE .07" DIA MIN TO SCALE	TANK	YELLOW	CONTINUOUS	1
	WOOD FENCE	WDFENCE/X	WHITE	CONTINUOUS	1

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

SITE PLAN SYMBOLS FOR CONSTRUCTION CONTRACT PLANS

DRAWN	CLB	DATE	07/07/88
DESIGNED		DATE	
CHECKED		DATE	
REVIEWED		DATE	

MAP00001

SHT. 1 OF 3

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MISC. SITE PLAN SYMBOLS

PROPOSED	EXISTING		LAYER	COLOR	LINETYPE	LINEWEIGHT
		CULVERT-FOR UTILITIES ONLY	CULVERT/X	BLUE	——	1
		STEPS	STEPS/X	BLUE	——	1
BR	BR	BOAT RAMP	BOATRMP/X	BLUE	——	1

TRAFFIC CONTROL AND INFORMATION

PROPOSED	EXISTING		LAYER	COLOR	LINETYPE	LINEWEIGHT
		TIRE STOPS, CONCRETE	TIRESTP/X	RED	——	1

WATER SUPPLY FACILITIES

PROPOSED	EXISTING		LAYER	COLOR	LINETYPE	LINEWEIGHT
TW	TW	TRAILER WATER SERVICE	TRAILWS/X	CYAN	——	1
		STREAM WATER INTAKE STRUCTURE	SWATER/X	CYAN	——	1
SF	SF	SLOW SAND FILTER	SFILTER/X	CYAN	——	1
WT	WT	WATER STORAGE TANK	H2OTANK/X	CYAN	——	1
CC	CC	CHLORINE CONTACT TANK	CHLTANK/X	CYAN	——	1
PT	PT	PROPANE TANK	PROTANK/X	CYAN	——	1
CL	CL	UNDERGROUND HYPO-CHLORINATOR ENCLOSURE	UGHCHLE/X	CYAN	——	1
H	H	HYDRANT WITHOUT FOUNTAIN	HYDWOFO/X	CYAN	——	1
HF	HF	HYDRANT WITH FOUNTAIN	HYDWFO/X	CYAN	——	1
W 2"	W 2"	WATERLINE, SIZE AND TYPE	WATERLIN/X	CYAN	——	1
2"	2"	GATE VALVE AND SIZE	GATEVAL/X	CYAN	——	1
2"	2"	GLOBE VALVE AND SIZE	GLOBVAL/X	CYAN	——	1
SV	SV	SERVICE VALVE	SERVVAL/X	CYAN	——	1
AR	AR	AIR RELEASE VALVE	AIRRELV/X	CYAN	——	1
2" M	2" M	WATER METER AND SIZE	WATEMET/X	CYAN	——	1
PR	PR	PRESSURE REDUCING STATION	PRESSRS/X	CYAN	——	1
HB	HB	HOSE BIBB	HOSEBIB/X	CYAN	——	1
FH	FH	FIRE HYDRANT	FIREHYD/X	CYAN	——	1

MECHANICAL AND ELECTRICAL

PROPOSED	EXISTING		LAYER	COLOR	LINETYPE	LINEWEIGHT
GL	GL	GAS LINE	GASLINE/X	RED	——	1
OL	OL	OIL LINE	OILINE/X	RED	——	1
O	O	OIL (O) OR GAS (G) TANK	TANKGEN	RED	——	1
OT	OT	OVERHEAD TELEPHONE LINE	OHTLINE/X	RED	——	1
UT	UT	UNDERGROUND TELEPHONE LINE INTAKE STRUCTURE	UGTLINE/X	RED	——	1
OC	OC	OVERHEAD CONTROL CABLE	OHCCABL/X	RED	——	1
UC	UC	UNDERGROUND CONTROL CABLE	UGCCABL/X	RED	——	1
OP	OP	OVERHEAD PRIMARY POWERLINE	OHPPLIN/X	RED	——	1
UP	UP	UNDERGROUND PRIMARY POWERLINE	UGPPLIN/X	RED	——	1
OS	OS	OVERHEAD SECONDARY POWERLINE	OHSPLIN/X	RED	——	1
US	US	UNDERGROUND SECONDARY POWERLINE	UGSPLIN/X	RED	——	1
		PAD MOUNTED TRANSFORMER KVA,V,O	PADXFMR/X	RED	——	1
		POLE MOUNTED TRANSFORMER	POLXFMR/X	RED	——	1
		WALL MOUNTED DRY-TYPE TRANSFORMER	WALXFMR/X	RED	——	1
TP	PP	GUYED & ANCHORED TELEPHONE OR POWER POLE	GANPOLE/X	RED	——	1
TP	PP	TELEPHONE OR POWER POLE	TPPOLE/X	RED	——	1
GP	GP	GENERATOR PRIME POWER	GENPRPO/X	RED	——	1
GS	GS	GENERATOR STANDBY POWER	GENSTBP/X	RED	——	1
J	J	JUNCTION BOX	JUNCBOX/X	RED	——	1
SV	SV	BURIED POWER OR CONTROL LINE SPLICE VAULT	BPWRCSV/X	RED	——	1
D	D	DISCONNECT SWITCH	DISCOSW/X	RED	——	1
		MOTOR CONTROLLER	MOTCONT/X	RED	——	1
		MOTOR-3 PHASE	MOT3PH/X	RED	——	1
		MOTOR-1 PHASE	MOT1PH/X	RED	——	1
		DUPLEX RECEPTACLE 120V 15A WEATHER TIGHT	DUREWET/X	RED	——	1
		GROUND ROD	GRNDROD/X	RED	——	1
		SWITCH SINGLE POLE	SWSPOLE/X	RED	——	1
W.T.	W.T.	WATER TIGHT NEMA4	WTNEMA4/X	RED	——	1
W.P.	W.P.	WEATHERPROOF NEMA3	WPNEMA3/X	RED	——	1
C.O.	C.O.	CONDUIT ONLY	CONONLY/X	RED	——	1

SEWER AND SEWAGE FACILITIES

PROPOSED	EXISTING		LAYER	COLOR	LINETYPE	LINEWEIGHT
S 8" PVC	S 8" PVC	GRAVITY SEWER, SIZE AND TYPE	GRAVSEW/X	YELLOW	——	1
PS 6" CI	PS 6" CI	PRESSURE SEWER, SIZE AND TYPE	PRESSEW/X	YELLOW	——	1
SS 8"	SS 8"	STORM SEWER, SIZE AND TYPE	STRMSEW/X	YELLOW	——	1
CO	CO	SEWER CLEANOUT	SEWERCO/X	YELLOW	——	1
ST	ST	SEPTIC TANK	SEPTANK/X	YELLOW	——	1
		DRAINFIELD	DRFIELD/X	YELLOW	——	1
		SEEPAGE BED	SEEPBED/X	YELLOW	——	1
SP	SP	SEEPAGE PIT	SEEPPIT/X	YELLOW	——	1
HT	HT	HOLDING TANK	HLDTANK/X	YELLOW	——	1
WW	WW	WASTE WATER SUMP WITH ABSORPTION FIELD	WWSUMPF/X	YELLOW	——	1
WW S	WW S	WASTE WATER SUMP TIED TO SEWER	WWSUMPS/X	YELLOW	——	1
WW	WW	WASTE WATER SUMP WITH HOLDING TANK	WWSUMPT/X	YELLOW	——	1
TS	TS	TRAILER SEWER SERVICE	TRAILSS/X	YELLOW	——	1
TDS	TDS	TRAILER DUMP STATION	TRAILDS/X	YELLOW	——	1
PS #	PS #	PUMP STATION AND NUMBER	PUMPSTA/X	YELLOW	——	1
DW	DW	DRY WELL	DRYWELL/X	YELLOW	——	1

RECREATION FACILITIES

PROPOSED	EXISTING		LAYER	COLOR	LINETYPE	LINEWEIGHT
#3	#3	CAMP OR PICNIC UNIT OR NUMBER	CMPUNIT/X	GREEN	——	1
#3	#3	ROAD SPUR WITH CAMP OR PICNIC UNIT AND NUMBER	RSCUNIT/X	GREEN	——	1
		PICNIC TABLE SHELTER	TSHLTER/X	GREEN	——	1
F	F	FIRE RING	FIRERNG/X	GREEN	——	1
F	F	FIREPLACE	FIREPCE/X	GREEN	——	1
CS	CS	CAMPSTOVE	CAMPSTV/X	GREEN	——	1
G	G	GARBAGE CAN PAD	GARBPAD/X	GREEN	——	1

REFERENCE TO CONSTRUCTION DETAILS

A / 10 — A: DETAIL/CUT/SECTION DESIGNATION; 10: SHEET ON WHICH DETAIL/CUT/SECTION VIEW IS LOCATED

LAYER	COLOR	LINETYPE	LINEWEIGHT
DETLREF/X	WHITE	——	1

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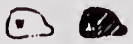
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SITE PLAN SYMBOLS FOR CONSTRUCTION CONTRACT PLANS

MAP00

SHT. 2
OF 3

PLANIMETRIC NATURAL FEATURES

		LAYER	COLOR	LINETYPE	LINEWEIGHT
	STREAM OR RIVER	HYDRO/X	BLUE	CUSTOM	1
	DRAINAGE	HYDRO/X	BLUE	CUSTOM	1
	WATER FALL - RIFFLE	HYDRO/X	BLUE	CONTINUOUS	1
	APPROXIMATE DRAINAGE THROUGH HEAVY TIMBER	HYDRO/X	BLUE	CUSTOM	1
	SPRING	HYDRO/X	BLUE	CONTINUOUS	1
	LAKE - INTERMITTENT CROSSHATCHED ADD "W" IF NO NAME	HYDRO/X	BLUE	CUSTOM	1
	MARSH OR SWAMP	HYDRO/X	BLUE	CUSTOM	1
	SAND OR GRAVEL	SANGRAV/X	YELLOW	CUSTOM	1
	TIMBER AREA OUTLINE	VEG/X	GREEN	CUSTOM	1
	IMPORTANT LARGE BRUSH PATCHES. SUBSTITUTE "S" FOR DOMESTIC SHRUBBERY	VEG/X	GREEN	CUSTOM	1
	INDIVIDUAL TREES WITH EXACT TRUNK LOCATION SHOWN WITH DOT OR CIRCLE WHEN VISIBLE	VEG/X	GREEN	CUSTOM	1
	DASHED LINE TO OUTLINE TALUS, SNOW FIELDS, CULTIVATION LIMITS, ETC. ALWAYS LABEL	BNDRY/X	RED	DASHED	1
	ORCHARD	VEG/X	GREEN	CONTINUOUS	1
	BAR SCALE - SHOWN ON EVERY SHEET PLOT TO MAP SCALE	INFO/X	WHITE	CONTINUOUS	1
	NORTH ARROW	INFO/X	WHITE	CONTINUOUS	1

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SITE PLAN SYMBOLS FOR CONSTRUCTION CONTRACT PLANS

SHT. 3
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LAND SURVEY		LAYER	COLOR
———	TOWNSHIP OR RANGE LINE: OTHER LAND SURVEYS	TNSHP/RG LN :OTHER	MAGTA
———	SECTION LINE: OTHER LAND SURVEYS	SEC LN	MAGTA
	SECTION CORNER	SEC COR	MAGTA
	CLOS COR	CLOS COR	MAGTA
	WITNESS CORNER OR MEANDER CORNER	WIT/MEA COR	MAGTA
———	TOWNSHIP OR RANGE LINE: (BLM OR FS PROTRACTION)	TNSHP/RG PROT LN	MAGTA
———	SECTION LINE (BLM OR FS PROTRACTION)	SEC LN PROT	MAGTA
———	OWNERSHIP	OWNERSHIP	MAGTA
—·—·—	LAND GRANT OR MINING CLAIM	LAND GR	MAGTA
•712	LAND GRANT MONUMENT (WITH OR WITHOUT GEODETIC POSITION)	LAND GR MON	MAGTA
———	TOWNSHIP OR RANGE LINE (LOCATION RELIABLE)	TNSHP/RG LN LOC REAL	MAGTA
———	TOWNSHIP OR RANGE LINE (LOCATION APPROXIMATE)	TNSHP/RG LN LOC APPROX	MAGTA
———	SECTION LINE (LOCATION RELIABLE)	SECT LN LOC REAL	MAGTA
- - - - -	SECTION LINE (LOCATION APPROXIMATE)	SECT LN LOC APPROX	MAGTA
+	SECTION CORNER (FOUND-INDICATED)	SECT COR FOUND	MAGTA
	HOMESTEAD ENTRY OR MINERAL SURVEY CORNER	MIN/HSTD SUR	MAGTA

LAND SURVEY	LAYER	COLOR
	WRK CT	RED
	FS ST	RED
	RS	RED
	INACT RS	RED
	LKOUT ST	RED
	INACT LKOUT	RED
	EMER LKOUT	RED
	FIRE CP	RED
	SPIKE CP	RED
	TR LOAD	RED
	STAG AREA	RED
	CMP GRND	RED
	C PLANE LNDG	RED
	BT LNDG	RED
	PORT PUMP ST	RED
	HOVER FILL ST	RED
	PUMP ST	RED
	TELEPH	RED
	HELIPRT	RED
	HELISPT	RED
	RK SOURCE QUARRY	RED
	RK SOURCE GRAVEL	RED
	CATL GRD	RED
	FIRE BRK	RED
	PROP FIRE BRK	RED
	HAND CTRL LN	RED
	PROP HAND CTRL LN	RED
	SPEC HZRD	RED

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SITE PLAN / MAP SYMBOLS

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ROADS – HIGHWAYS

	LAYER	COLOR
CLASS 1 PRIMARY HIGHWAY (HARD SURFACE)	CLS 1 PRIMRY RD HRD SURF	RED
CLASS 2 SECONDARY HIGHWAY (HARD SURFACE)	CLS 2 2NDRY RD HRD SURF	RED
CLASS 4 UNIMPROVED ROAD. (INCLUDES 4WD ROADS)	CLS 4 UNIMP RD	RED
CLASS 5 TRAIL	CLS 5 TRAIL	RED
APPROXIMATE LOCATION TRAILS	APPROX LOC TRAILS	RED
DUAL HIGHWAY	DUAL HGWY	RED
APPROXIMATE LOCATION ROADS	APPROX LOC RDS	RED
INTERCHANGE CLASS 1 OR CLASS 2 HIGHWAY	INTERCH CLS1 CLS2 RD	RED

CONTROL DATA–MONUMENTS

	LAYER	COLOR
HORIZONTAL CONTROL STATION (THIRD ORDER OR BETTER. PERMANENT MARK)	HORZ 3RD OR BETR PMT MK	WHITE
HORIZONTAL CONTROL STATION (ELEVATION THIRD ORDER OR BETTER)	HORZ VERT 3RD OR BETR	WHITE
HORIZONTAL CONTROL STATION (VERTICAL ANGLE ELEVATION)	HORZ VERT ANGL	WHITE
HORIZONTAL CONTROL STATION (CHECKED SPOT ELEVATION)	HORZ CHK SPOT EL	WHITE
VERTICAL CONTROL STATION (MARKED WITH TABLET. ELEVATION THIRD ORDER OR BETTER)	VERT 3RD OR BETR	WHITE
CHECKED SPOT ELEVATION	CHK SPOT EL	WHITE
BOUNDARY MONUMENT WITH NUMBER AND ELEVATION	BNDRY MON NUM EL	WHITE
REFERENCE MONUMENT	REF MON	WHITE
U.S. MINERAL OR LOCATION MONUMENT	USLM	WHITE
HORIZONTAL CONTROL STATION (COINCIDENT WITH SECTION CORNER)	HORZ CNT SECT COR	WHITE
BENCH MARK (COINCIDENT WITH FOUND SECTION CORNER)	BM SECT COR	WHITE
OTHER CONTROL POINTS (OBJECT MAY OR MAY NOT HAVE GEODETIC POSITION)	OTHER CNT	WHITE

ROADS – HIGHWAYS

	LAYER	COLOR
NATIONAL FOREST, PURCHASE UNIT OR NATIONAL GRASS-LAND BOUNDARY	NF BNDRY	WHITE
ADMINISTRATIVE FOREST BOUNDRY	ADMIN BNDRY	WHITE
PURCHASE UNIT OR PURCHASE UNIT EXTENSION BOUNDRY	PUR UNIT	WHITE
NATIONAL	NAT. BNDRY	WHITE
STATE OR TERRITORY	STATE BNDRY	WHITE
COUNTY, PARISH, MUNICIPIO, JUDICIAL DIVISION, ALASKA BOROUGH	CO. BNDRY	WHITE
RANGER DISTRICT BOUNDARY	DIST BNDRY	WHITE
NATIONAL OR STATE RESERVATION, PARK, RECREATION AREA, OR MONUMEAT; VERY LARGE CITY, COUNTY, OR PRIVATE PARK	REC AREA BNDRY	WHITE
WILDLIFE REFUGE BOUNDRY	WILDLIFE BNDRY	WHITE
WILDERNESS PRIMITIVE, SCENIC, ARCHEOLOGICAL, GEOLOGIC, HISTORICAL, RESEARCH NATURAL AREA & OTHER SPECIAL AREA BNDYS	WILD. BNDRY	WHITE
SMALL PARK, CEMETARY, AIRPORT, ETC.	ARPRT BNDRY	WHITE
SMALL CEMETARY	SM. CEM	WHITE
CEMETARY	CEM	WHITE

TRANSP – SYMBOLS

	LAYER	COLOR
INTERSTATE	INTST HWY	RED
U.S. HIGHWAY	US HWY	RED
WASHINGTON ST	WA ST HWY	RED
OREGON ST	OR ST HWY	RED
COUNTY	CO RD	RED
ARTERIAL RD	ART RD	RED
FOREST HIGHWAY	FOR HWY	RED

TRANSP – SYMBOLS

	LAYER	COLOR
ANNUALLY OPEN	ANNUAL	RED
ROAD TERMINI	RD TERM	RED
COLLECTOR RD NO. BOXES	COLL RD NUM	RED
LOCAL RD NO. BOXES	LOCAL RD NUM	RED
TRAIL NO. BOXES	TRAIL NUM	RED
PRIVATE RD NO. BOXES	PVT RD NUM	RED

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SITE PLAN / MAP SYMBOLS

MAP00005 SHT. 1 OF 1

ROAD MANAGEMENT AUTOCAD SYMBOLS

FUNCTIONAL CLASSIFICATION

———	STATE & COUNTY HIGHWAYS	FUNCT_CLASS_ST_CO_HWY_	MAGENTA	CONTINUOUS	LINE = .0140
———	F.S. ARTERIAL ROADS	FUNCT_CLASS_ARTERIAL	BLUE	CONTINUOUS	LINE = .0125
———	F.S. COLLECTOR ROADS	FUNCT_CALSS_COLLECTOR	RED	CONTINUOUS	LINE = .0115
———	F.S. LOCAL-CONST. SERVICE	FUNCT_CLASS_LOCAL_CS	GREEN	CONTINUOUS	LINE = .0095
———	F.S. LOCAL-INTERM.SERVICE	FUNCT_CLASS_LOCAL_IS	BLUE	CONTINUOUS	LINE = .0095

TIMBER VOLUMES

———	TIMBER VOLUMES (MMBF/YR)	TIMBER_VOLUME_1-5	MAGENTA	CONTINUOUS	LINE = .0095
———	TIMBER VOLUMES (MMBF/YR)	TIMBER_VOLUME_5-10	RED	CONTINUOUS	LINE = .0105
———	TIMBER VOLUMES (MMBF/YR)	TIMBER_VOLUME_10-30	GREEN	CONTINUOUS	LINE = .0115
———	TIMBER VOLUMES (MMBF/YR)	TIMBER_VOLUME_30-50	YELLOW	CONTINUOUS	LINE = .0125
———	TIMBER VOLUMES (MMBF/YR)	TIMBER_VOLUME_50+	GREEN	CONTINUOUS	LINE = .0140

TRAFFIC VOLUMES

———	TRAFFIC VOLUMES (SADT)	TRAFFIC_VOL_0-20	MAGENTA	CONTINUOUS	LINE = .0125
———	TRAFFIC VOLUMES (SADT)	TRAFFIC_VOL_20-50	BLUE	CONTINUOUS	LINE = .0125
———	TRAFFIC VOLUMES (SADT)	TRAFFIC_VOL_50-100	GREEN	CONTINUOUS	LINE = .0125
———	TRAFFIC VOLUMES (SADT)	TRAFFIC_VOL_100-250	YELLOW	CONTINUOUS	LINE = .0125
———	TRAFFIC VOLUMES (SADT)	TRAFFIC_VOL___250+	RED	CONTINUOUS	LINE = .0125

ROAD LEVEL MAINTENANCE

- - - - - - -	ROAD MAINTENANCE LEVELS	RD_MAINTENANCE_LEVEL_1	MAGENTA	DASHED	LINE = .0125, DASH = 2/32"
- - - - -	ROAD MAINTENANCE LEVELS	RD_MAINTENANCE_LEVEL_2	BLUE	DASHED	LINE = .0125, DASH = 1/3"
— — —	ROAD MAINTENANCE LEVELS	RD_MAINTENANCE_LEVEL_3	GREEN	DASHED	LINE = .0125, DASH = 1/4"
— - —	ROAD MAINTENANCE LEVELS	RD_MAINTENANCE_LEVEL_4	YELLOW	DASHED	LINE = .0125, DASH = 1/4 & 3/32"
———	ROAD MAINTENANCE LEVELS	RD_MAINTENANCE_LEVEL_5	RED	CONTINUOUS	LINE = .0125, SYMBOL= 3/32

TRAFFIC SERVICE LEVELS

— — —	TRAFFIC SERVICE LEVELS	TRAFFIC_SERVICE-LEVEL_A	RED	DASHED	LINE = .0130, DASH = 5/18"
— — —	TRAFFIC SERVICE LEVELS	TRAFFIC_SERVICE_LEVEL_B	YELLOW	DASHED	LINE = .0130, DASH = 1/4 "
- - - - -	TRAFFIC SERVICE LEVELS	TRAFFIC_SERVICE_LEVEL_C	GREEN	DASHED	LINE = .0130, DASH = 1/8"
- - - - - -	TRAFFIC SERVICE LEVELS	TRAFFIC_SERVICE_LEVEL-D	BLUE	DASHED	LINE = .0130, DASH = 3/32"

ROAD CONDITIONS

—VP—	ROAD COND. VERY POOR	RD_CONDITION_VERY_POOR	BLACK	CONTINUOUS	LINE = .0125, LETTERS = 1/8"
—P—	ROAD COND.-POOR	RD_CONDITION_POOR	BLACK	CONTINUOUS	LINE = .0125, LETTERS = 1/8"
—F—	ROAD COND.-FAIR	RD_CONDITION_FAIR	BLACK	CONTINUOUS	LINE = .0125, LETTERS =-1/8"
—G—	ROAD COND.GOOD	RD_CONDITION_GOOD	BLACK	CONTINUOUS	LINE = .0125, LETTERS = 1/8"
—VG—	ROAD COND.-VERY GOOD	RD_CONDITION_VERY_GOOD	BLACK	CONTINUOUS	LINE = .0125, LETTERS = 1/8"

ROAD SURFACE AND LANE TYPE

	NATIVE SURFACE-SINGLE LANE	RD_SURF_NATIVE_SINGLE_LN	BLUE	DASHED	LINE = .0125, SYMBOL = 1/8"
	GRAVEL SURFACE-SINGLE LANE	RD_SURF_NATIVE_SINGLE_LN	GREEN	CONTINUOUS	LINE = .0125, SYMBOL = 1/8"
	GRAVEL SURFACE-DOUBLE LANE	RD_SURF_GRAVEL_DOUBLE_LN	GREEN	CONTINUOUS	LINE = .0125, SYMBOL = 1/8"
	ASPHALT SURFACE-SINGLE LANE	RD_SURF_ASPHALT_SNGL_LN	RED	CONTINUOUS	LINE = .0125, SYMBOL = 1/8"
	ASPHALT SURFACE-DOUBLE LANE	RD_SURF_ASPHALT_DUBLE_LN	RED	CONTINUOUS	LINE = .0125, SYMBOL = 1/8"

VEHICULAR ACCIDENTS

—○—	ACCIDENT REPORT-PROPERTY/VEH DAMAGE-DRIVER ERROR YEAR	ACCIDENT_PROP_VEH_DE_YR	YELLOW	CUSTOM	LINE = .0125, SYMBOL = 1/8"
—□—	ACCIDENT REPORT-INJURY-WEATHER RELATED-YEAR	ACCIDENT_INJURY_WR_YR	BLUE	CUSTOM	LINE = .0125, SYMBOL = 1/8"
—@—	ACCIDENT REPORT-FATALITY-ROAD RELATED-YEAR	ACCIDENT_FATALITY_RD_YR	RED	CUSTOM	LINE = .0125, SYMBOL = 1/8"
—△—	ACCIDENT REPORT-INJURY-VEHICLE FAILURE-YEAR	ACCIDENT_INJURY_VF_YR	BLACK	CUSTOM	LINE = .0125, SYMBOL = 1/8"

ROAD ENTRANCE MANAGEMENT

—▮—	ROAD ENTRANCE-BLOCKED WITH GUARDRAIL BARRICADE	ROAD_ENTRANCE_GUARDRAIL	BLACK	CUSTOM	SYMBOL = 1/8"
—▲—	ROAD ENTRANCE-BLOCKED WITH EARTHEN MOUND	ROAD_ENTRANCE_EARTH_MUND	BLACK	CUSTOM	SYMBOL = 1/8"
—/—	ROAD ENTRANCE-BLOCKED WITH LOG BARRICADE	ROAD_ENTRANCE_____LOGS	BLACK	CUSTOM	SYMBOL = 1/8"
—I—	ROAD ENTRANCE-BLOCKED WITH GATE	ROAD_ENTRANCE_____GATE	BLACK	CUSTOM	SYMBOL = 1/8"
—I—	ROAD ENTRANCE-BLOCKED WITH EDGE STRIPE	ROAD_ENTRANCE_EDGESTRIPE	BLACK	CUSTOM	SYMBOL = 1/8"
—I—	ROAD ENTRANCE-BLOCKED WITH DITCH ACROSS ROAD	ROAD_ENTRANCE_DITCH	BLACK	CUSTOM	SYMBOL = 1/8"
—+—	ROAD ENTRANCE-BLOCKED WITH CAMOUFLANGE &DEBRIS	ROAD_ENTRANCE_CAMO	BLACK	CUSTOM	SYMBOL = 1/8"
—##—	ROAD ENTRANCE-BLOCKED WITH SEVERAL TREATMENT METHODS	ROAD_ENTRANCE_SEVERAL	BLACK	CUSTOM	SYMBOL = 1/8"
—•—	ROAD ENTRANCE-BLOCKED WITH SEASONAL CLOSURE	ROAD_ENTRANCE_SEASONAL	BLACK	CUSTOM	SYMBOL = 1/8"

ROADSIDE STRUCTURES

—CD—	MAJOR CULVERT W/MILE POINT	MAJOR_CULVER_MILE_PT	BLACK	CUSTOM	SYMBOL = 1/8"
—▣—	RETAINING WALL W/ MILE POINT	RETAINING_WALL_MP	BLACK	CUSTOM	SYMBOL = 1/8"
—CD—	BRIDGE WITH MILE POINT	BRIDGE_MILE_POINT	BLACK	CUSTOM	SYMBOL = 1/8"

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ROAD MANAGEMENT SYMBOLS

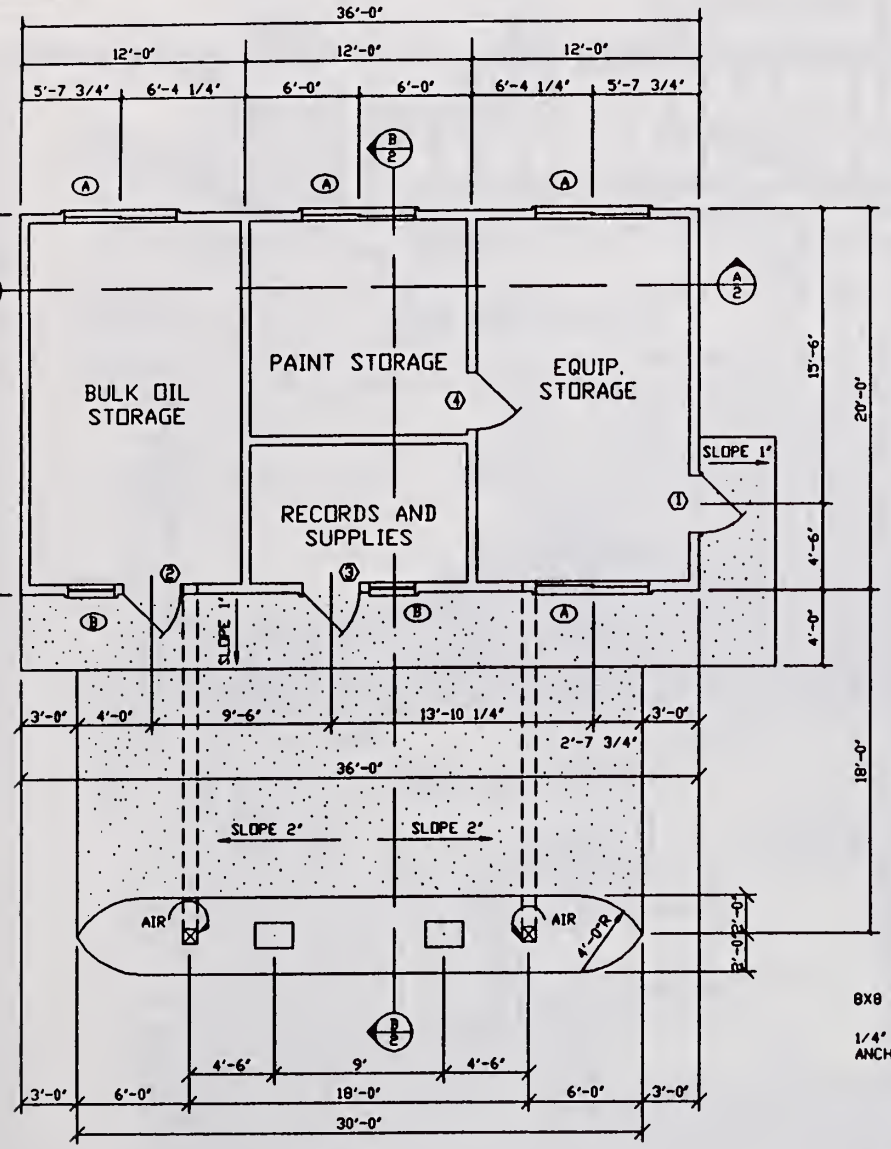
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DIVD-6 DWG

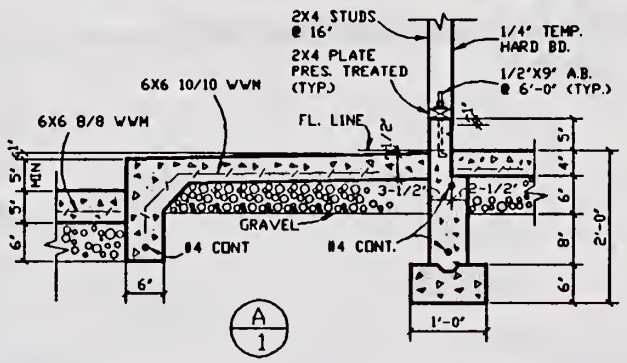
| | | |

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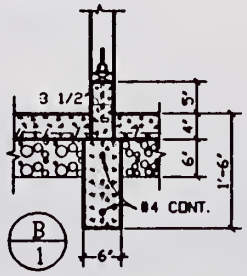


FLOOR PLAN

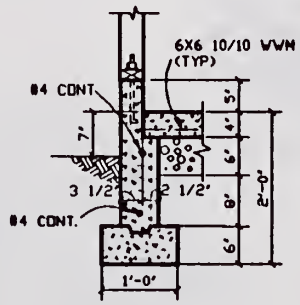
1/4" = 1'-0"



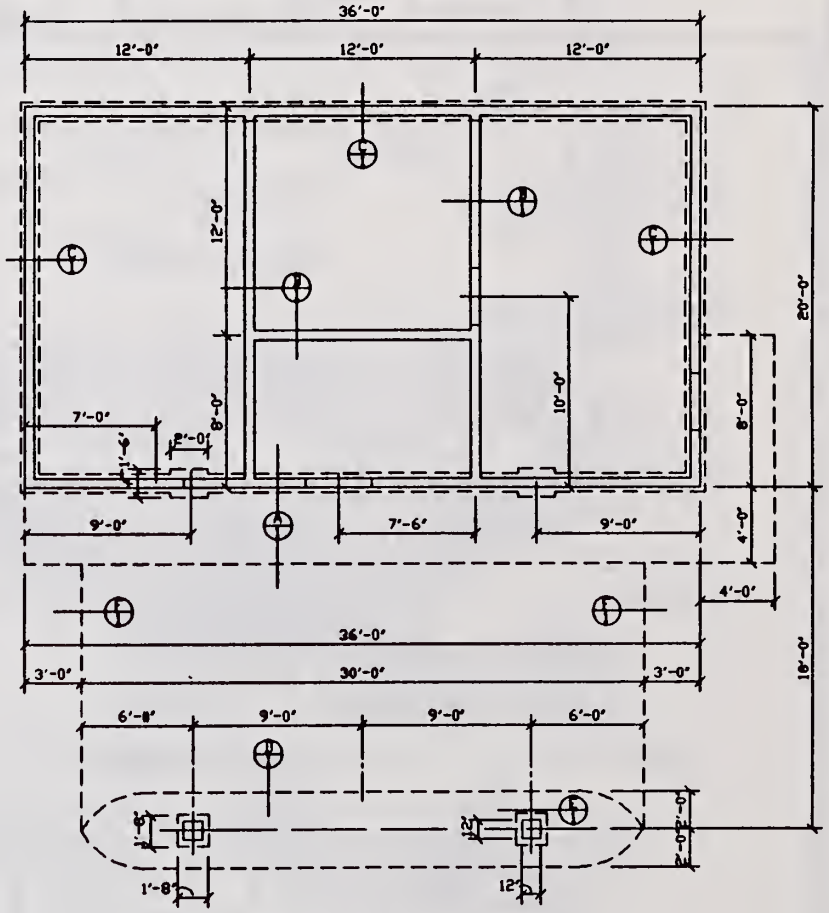
A/1



B/1

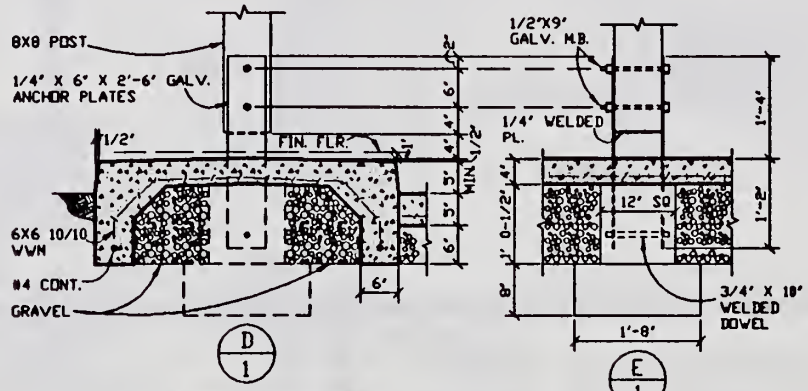


C/1



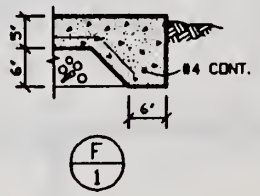
FOUNDATION PLAN

1/4"=1'-0"



D/1

E/1



F/1

DOOR SCHEDULE

NO.	SIZE	TYPE	FIN.	HDW.	KICK PL.	REMARKS
(1)	3'-0" X 6'-8" X 1 3/4"	FLUSH PANEL S.C.	ENAMEL	A-1	PLSTC. LAM.	
(2)	3'-0" X 6'-8" X 1 3/4"	S.C.		A-1		
(3)	3'-0" X 6'-8" X 1 3/4"	S.C.		A-1		
(4)	3'-0" X 6'-8" X 1 3/3"	H.C.		B-2		

WINDOW SCHEDULE

NO.	SIZE	TYPE	REMARKS
(A)	6'-0" X 3'-0"	ALUM. FRAME - H.S.	
(B)	2'-5 1/2" X 6'-0"	WOOD FRAME - FIXED	8 OZ. WHITE FIBERGLASS

A0000100
REVISED: 10 SEP 85

R. O. APPROVAL _____ TITLE _____

APPROVED: _____ FOREST SUPERVISOR

R. O. STAFF RECOMMENDATION

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

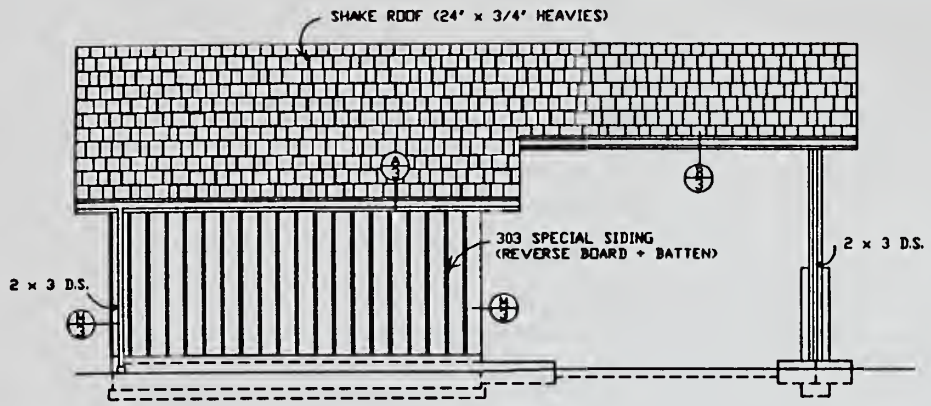
DRAWN _____ DATE
DESIGNED _____ DATE
CHECKED _____ DATE
REVIEWED _____ DATE

GAS & OIL STORAGE BLDG.

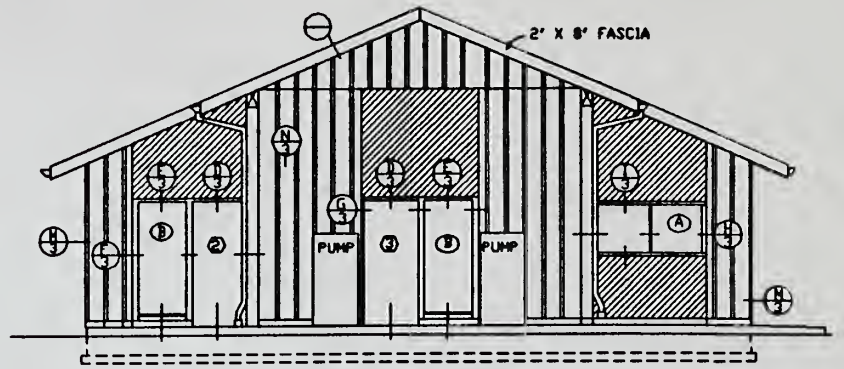
FLOOR PLAN
FOUNDATION
DOOR & WINDOW SCHEDULE

SHT 1
OF 5

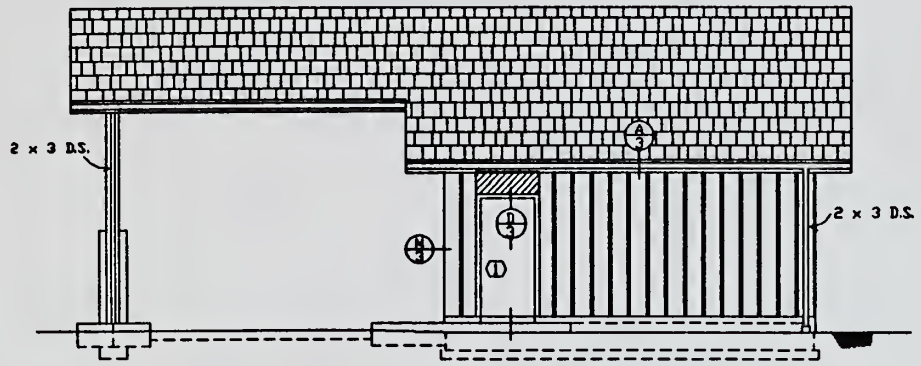
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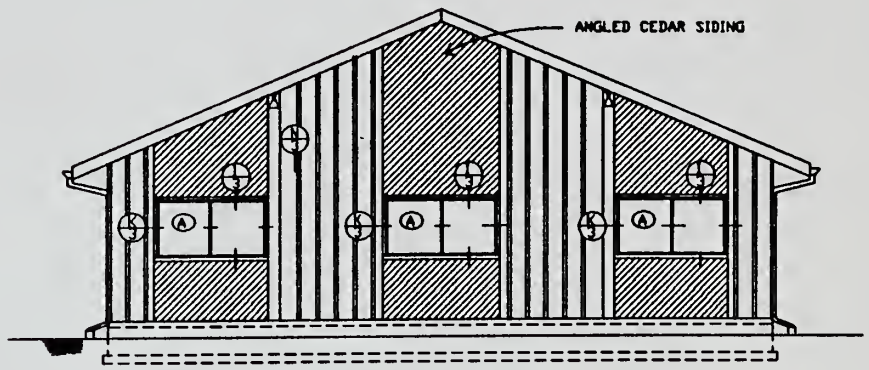
LEFT SIDE ELEVATION
1/4"=1'-0"



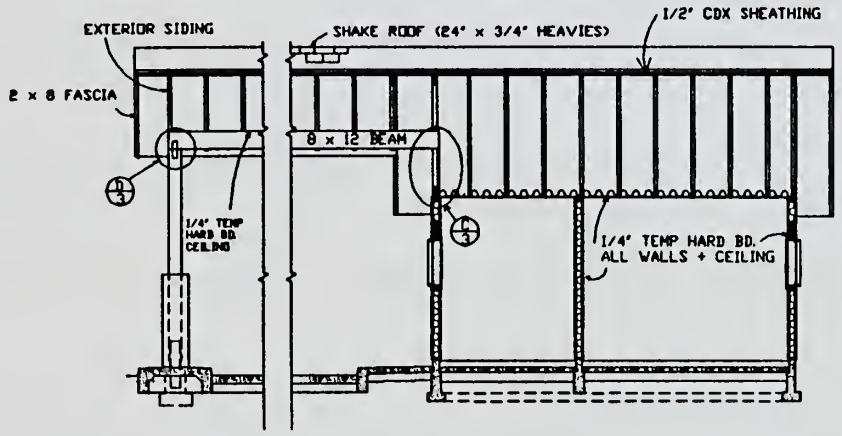
FRONT ELEVATION
1/4"=1'-0"



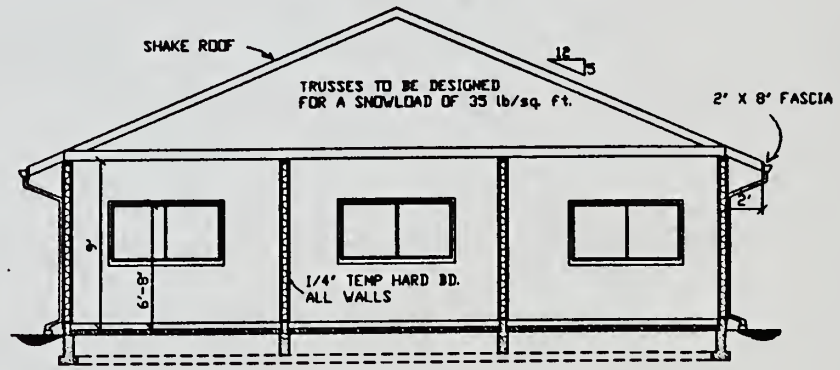
RIGHT SIDE ELEVATION
1/4"=1'-0"



REAR ELEVATION
1/4"=1'-0"



SECTION B/2
1/4"=1'-0"



SECTION A/2
1/4"=1'-0"

A0000200

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

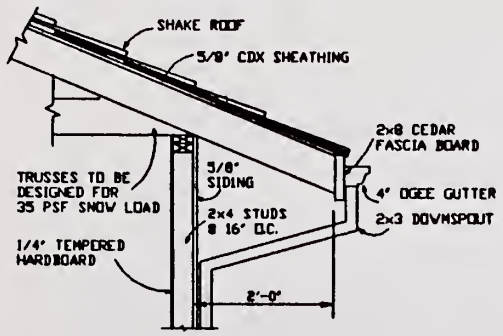
DRAWN ____ DATE ____
DESIGNED ____ DATE ____
CHECKED ____ DATE ____
REVIEWED ____ DATE ____

GAS & OIL STORAGE BUILDING 556

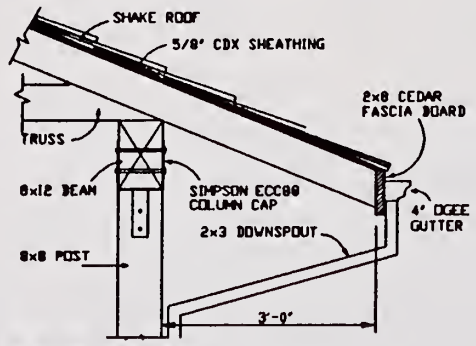
ELEVATIONS & SECTIONS

SHT 2 OF 5

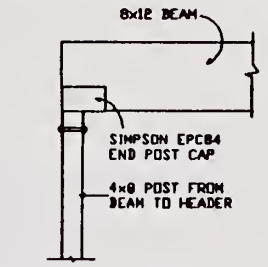
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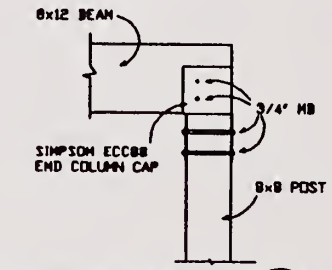
EAVE DETAIL (A/3)
1"=1'-0"



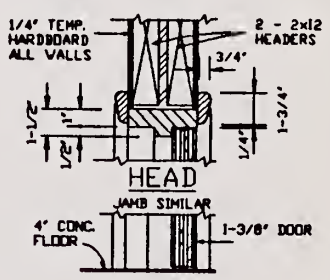
EAVE DETAIL & CANOPY (B/3)
1"=1'-0"



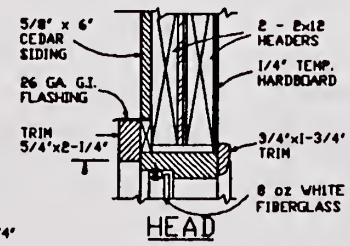
BEAM & WALL (C/3)
1"=1'-0"



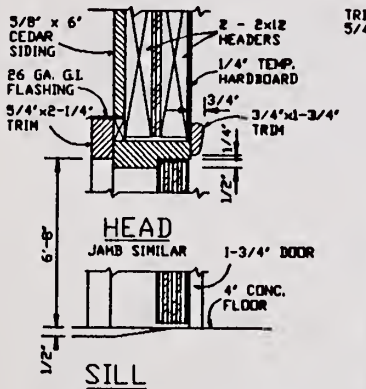
BEAM & COLUMN (C-A/3)
1"=1'-0"



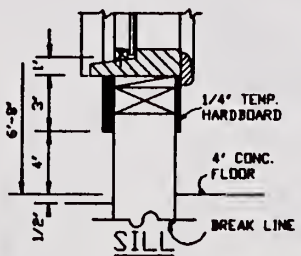
SILL
INT. DOOR (4)
SECTION (J/3)



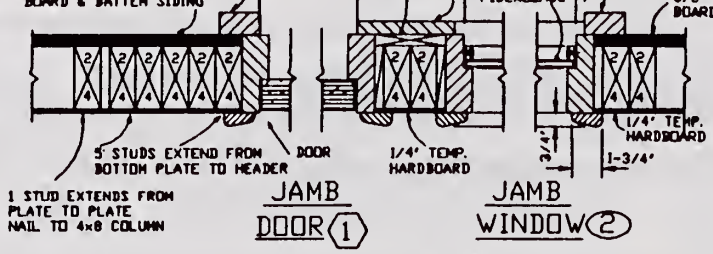
HEAD



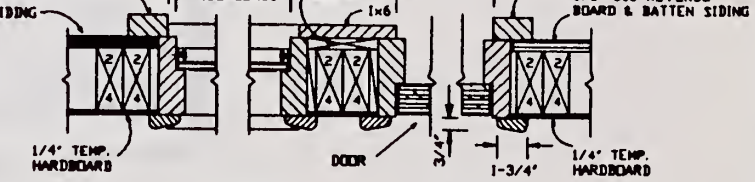
SILL
DOORS (1)(2)(3)
SECTION (D/3)
3"=1'-0"



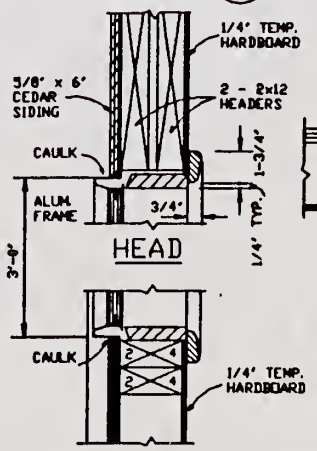
SILL
WINDOW (4)
SECTION (E/3)
3"=1'-0"



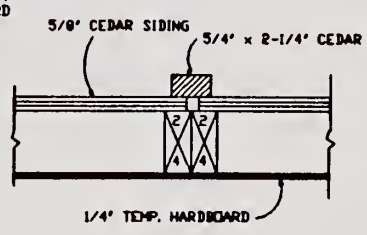
JAMB
DOOR (1)
JAMB
WINDOW (2)
SECTION (F/3)
3"=1'-0"



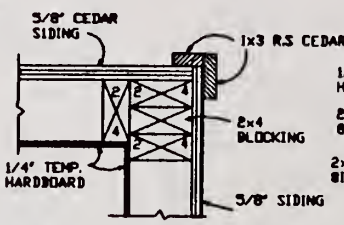
JAMB
WINDOW
JAMB
DOOR
SECTION (G/3)
3"=1'-0"



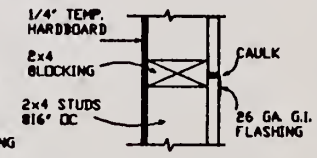
SILL
WINDOW (A)
SECTION (I/3)



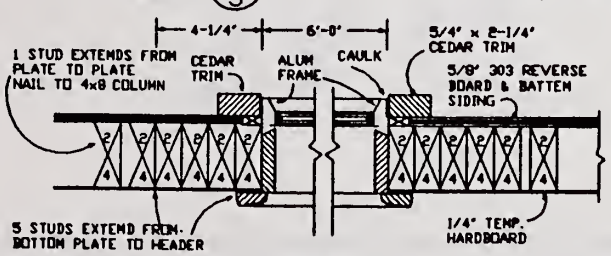
SIDING & TRIM (L/3)
3"=1'-0"



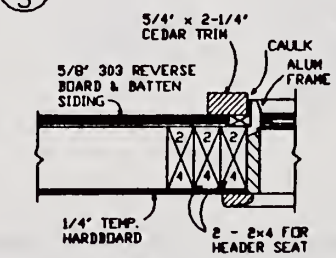
CORNER DETAIL (M/3)
3"=1'-0"



FLASHING DETAIL (N/3)
3"=1'-0"



JAMB
SECTION (H/3)



JAMB
SECTION (K/3)

A0000300
13 SEP 85

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

DRAWN DATE
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

GAS & OIL STORAGE
BLGD. 536

DETA

SHT. 3
OF 5

33.6" X 22.6" BORDER
PLOT 1=1 FOR 12"=1 FT.

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ABOR-01.DWG

PLOT 1=24 FOR 1/2"=1 FT.
67 X 40 FEET
DRAWING AREA APPROX.

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ABOR–02.DWG

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
ORE-6
Pacific Northwest Region

Drawn
Design
Checked
Reviewed

Forest
Project

Site Plan

Sht 1 Of 8

PLOT 1=48 FOR 1/4"=1 FT.
133 X 80 FEET
DRAWING AREA APPROX.

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ABOR-04.DWG

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
R-6
The Pacific Northwest Region

Drawn
Design
Checked
Reviewed

Forest
Project

Site Plan

Sht 1 Of 2

PLOT 1=96 FOR 1/8"=1 FT.

267 X 163 FEET

DRAWING AREA APPROX.

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ABOR-08.DWG

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
ORE-6
The Northwest Region

Drawn
Design
Checked
Reviewed

Forest
Project

Site Plan

Sht 1 Of 2

PLOT 1=192 FOR 1/16"=1 FT.

537 X 327 FEET APPROX.

DRAWING AREA

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ABOR-16.DWG

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE R-6 The Pacific Northwest Region		Drawn Design Checked Reviewed		Forest Project	Site Plan Sht 1 of 2

34"X23" BORDER

(PLOTS 98.7% FULL SIZE ON 36X24 MEDIA (FIT))

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ABOR-OLD.DWG

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
CORE-6
Th[illegible] Northwest Region

Drawn
Design
Checked
Reviewed

Forest
Project

Site Plan

Sht 1 Of 2

Northwest Region | Reviewed | RANGER RESIDENCES | or

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DOOR SCHEDULE

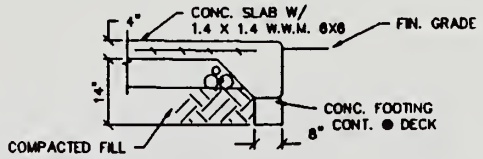
NO.	SIZE	MAT'L	TYPE	HDW	FINISH	FRAME	FINISH	DETAILS	REMARKS
11	3'-0" X 6'-8" X 1 3/4"	HM	A	1	ENAMEL	WOOD	PAINT	9/6 SIM,4/6,5/6	INSUL.-WEATHERSTRIP
2	3'-0" X 6'-8" X 1 3/4"	HM	A	1	ENAMEL	WOOD	PAINT	9/6 SIM,5/6 SIM	INSUL.-WEATHERSTRIP
3	3'-0" X 6'-8" X 1 3/4"	HM	A	1	ENAMEL	WOOD	PAINT	4/6	INSUL.-WEATHERSTRIP
4	6'-0" X 6'-8" X	ALUM	C		FACTORY	ALUM	FACTORY	6/6	SLDG.GLASS-TEMP/DBL
5	2'-6" X 6'-8" X 1 3/4"	WOOD	A	2	STAIN	WOOD	STAIN	10/6	
6	4'-0" X 6'-8" X 1 3/8"	WOOD	B	4	STAIN		PAINT		BIFOLD
7	4'-0" X 6'-8" X 1 3/8"	WOOD	B	4	STAIN		PAINT		BIFOLD
8	2'-10" X 6'-8" X 1 3/4"	WOOD	A	2	STAIN	WOOD	PAINT	10/6	
9	2'-6" X 6'-8" X 1 3/4"	WOOD	A	2	STAIN	WOOD	STAIN	10/6, 8/6	
10	2'-10" X 6'-8" X 1 3/4"	WOOD	A	3	STAIN	WOOD	STAIN	10/6, 8/6	
11	4'-0" X 6'-8" X 1 3/8"	WOOD	B	4	STAIN		PAINT		BIFOLD
12	3'-0" X 6'-8" X 1 3/8"	WOOD	B	4	STAIN		PAINT		BIFOLD
13	2'-10" X 6'-8" X 1 3/4"	WOOD	A	2	STAIN	WOOD	STAIN	10/6	
14	6'-0" X 6'-8" X 1 3/8"	WOOD	B	4	STAIN		PAINT		BIFOLD
15	2'-0" X 6'-8" X 1 3/8"	WOOD	B	4	STAIN		PAINT		BIFOLD
16	2'-10" X 6'-8" X 1 3/4"	WOOD	A	2	STAIN	WOOD	STAIN	10/8	
17	3'-0" X 6'-8" X 1 3/8"	WOOD	B	4	STAIN		PAINT		BIFOLD
18	3'-0" X 6'-8" X 1 3/8"	WOOD	B	4	STAIN		PAINT		BIFOLD
19	9'-0" X 7'-0"	WOOD			ENAMEL	WOOD	PAINT		OVERHEAD DOOR

DOOR TYPES

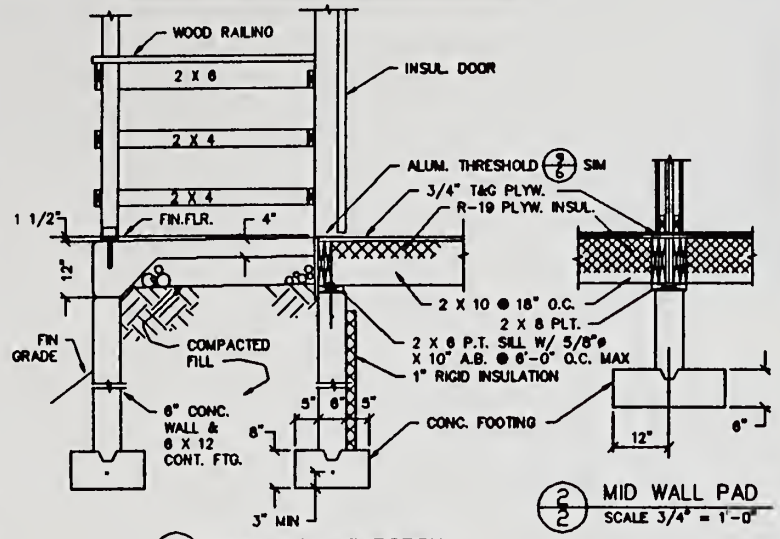


ROOM FINISH SCHEDULE

	ROOM	FLOOR	BASE	WALLS	CEILING	HEIGHT	REMARKS
		PLYWOOD - CARPET 4" CONC. SLAB-SEALED PLYWOOD - SHT. VINYL	RUBBER WOOD	1/2" GYP.BD. - PAINTED 5/8" TYPE X GYP.BD. - PT. 5/8" W.R. GYP.BD. - PT.	1/2" GYP.BD. - PAINTED 5/8" W.R. GYP.BD. - PT. EXPOSED STRUCTURE		
1	LIVING	●		●	●	7'-9"	
2	DINING		●	●	●	7'-9"	
3	KITCHEN		●	●	●	7'-9"	
4	UTILITY		●		●	7'-9"	
5	BATH		●	●	●	7'-9"	
6	MSTR BATH		●	●	●	7'-9"	
7	BEDROOM #1	●		●	●	7'-9"	
8	BEDROOM #2	●		●	●	7'-9"	
9	BEDROOM #3	●		●	●	7'-9"	
10	HALL	●		●	●	7'-9"	
11	GARAGE/STOR.	●			●	8'-0"+	

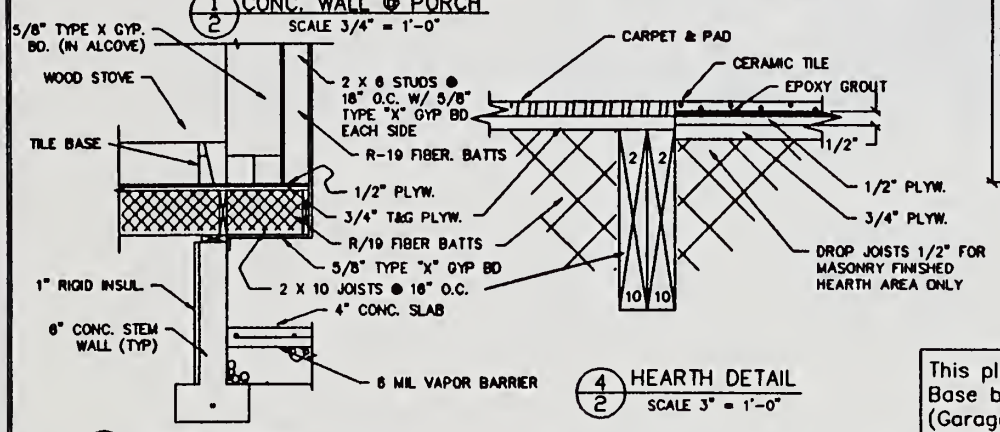


6/2 SLAB EDGE
SCALE 3/4" = 1'-0"



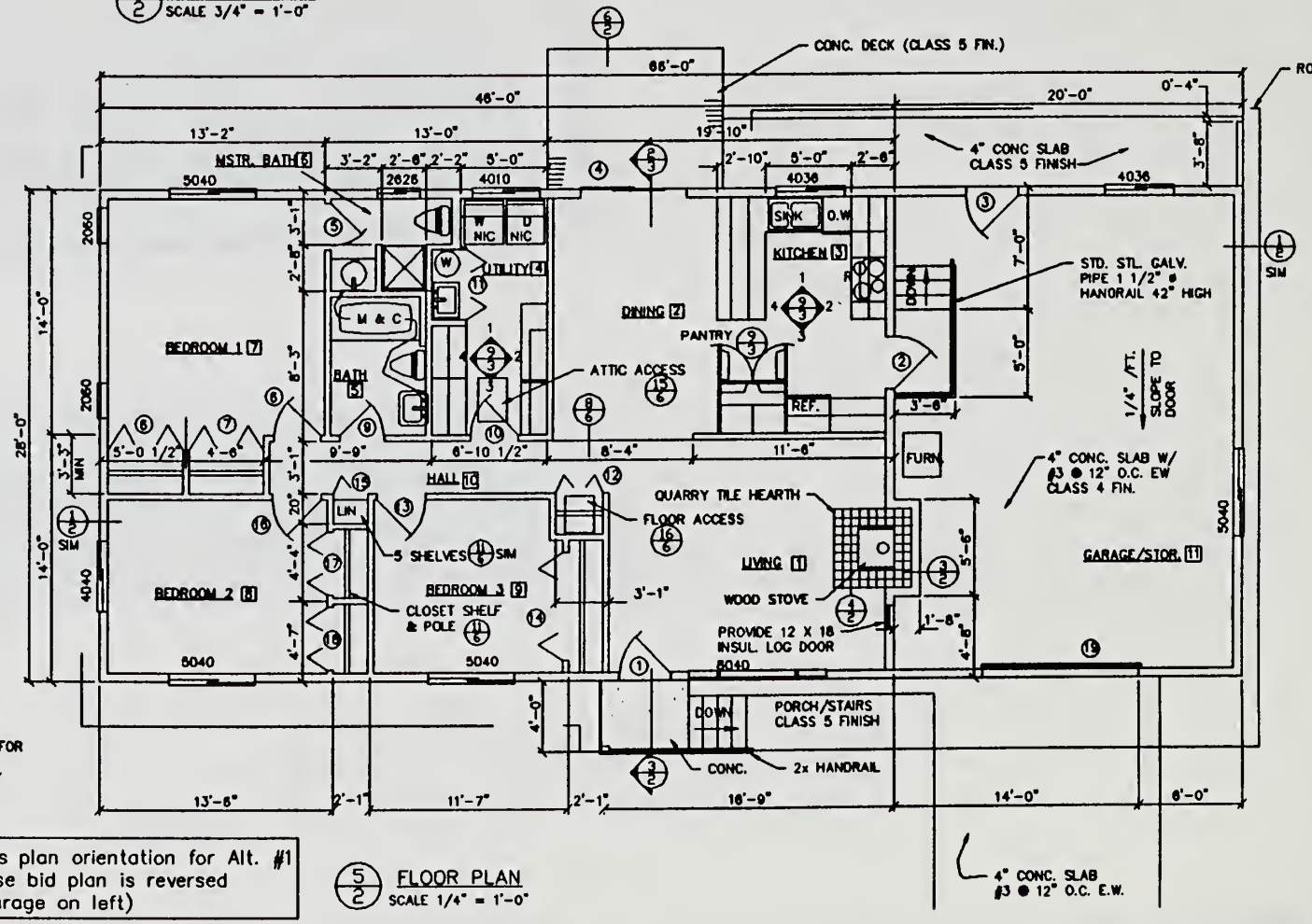
2/2 MID WALL PAD
SCALE 3/4" = 1'-0"

1/2 CONC. WALL @ PORCH
SCALE 3/4" = 1'-0"



4/2 HEARTH DETAIL
SCALE 3" = 1'-0"

3/2 STOVE ALCOVE
SCALE 3/4" = 1'-0"



This plan orientation for Alt. #1 Base bid plan is reversed (Garage on left)

5/2 FLOOR PLAN
SCALE 1/4" = 1'-0"

AS020002
DEC 24,'87

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
The Pacific Northwest Region

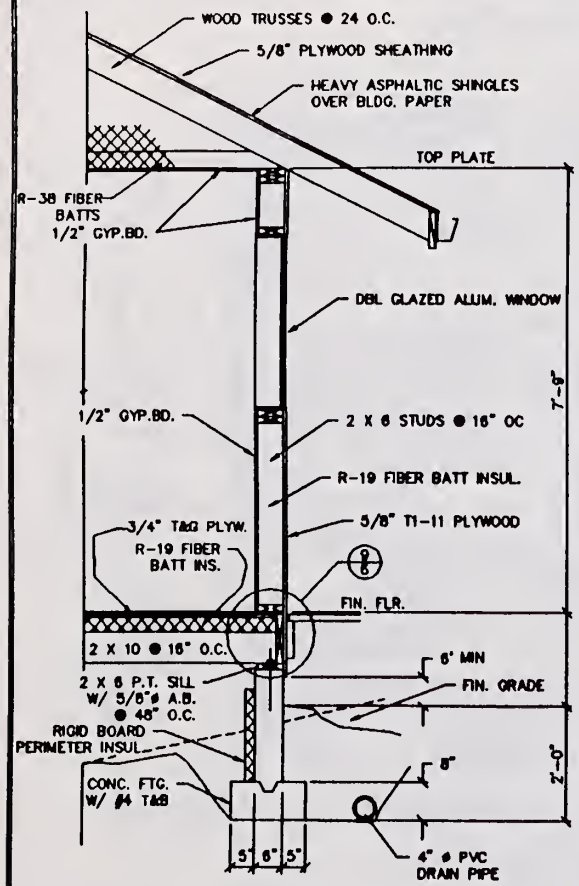
OCHOCO NATIONAL FOREST

STANDARD 270R
3 BDR. RESIDENCE Region 6
RANGER RESIDENCES

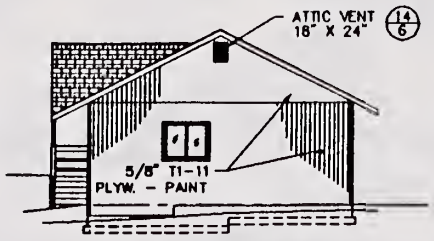
FLOOR PLAN, DETAILS
SCHEDULES

2A

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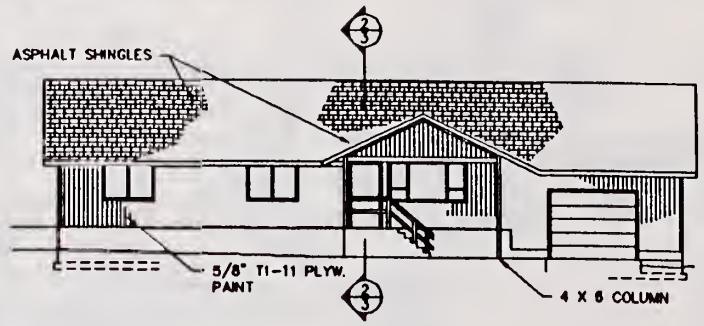
1/3 WALL SECTION
SCALE 3/4" = 1'-0"



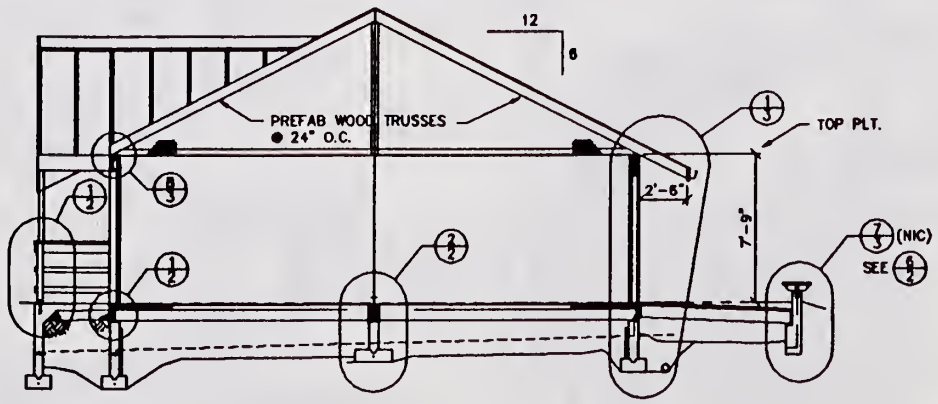
6/3 RIGHT ELEVATION
SCALE 1/8" = 1'-0"



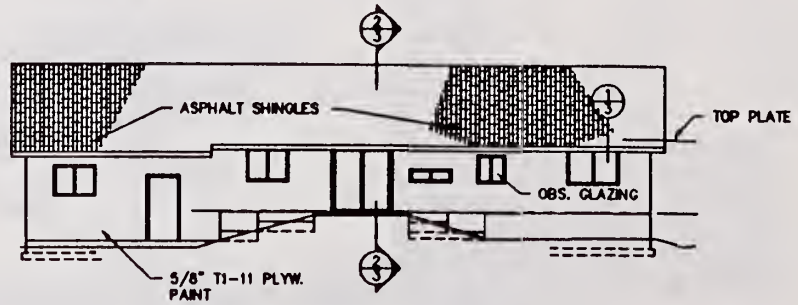
3/3 LEFT ELEVATION
SCALE 1/8" = 1'-0"



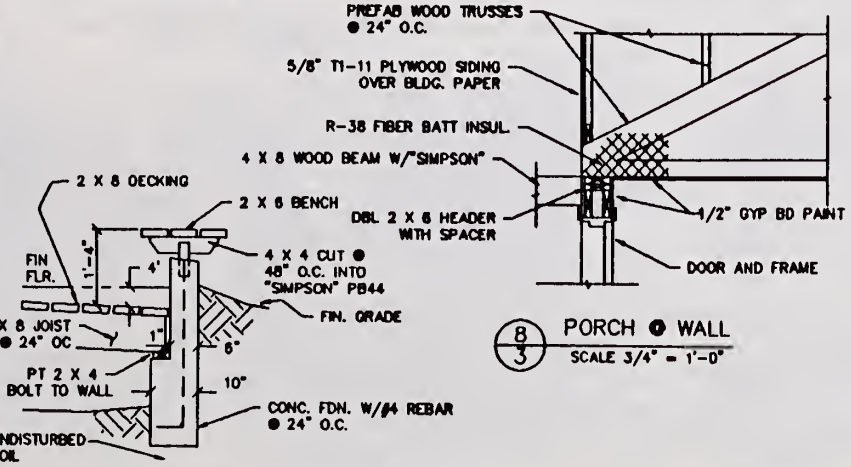
4/3 FRONT ELEVATION
SCALE 1/8" = 1'-0"



2/3 CROSS SECTION
SCALE 1/4" = 1'-0"

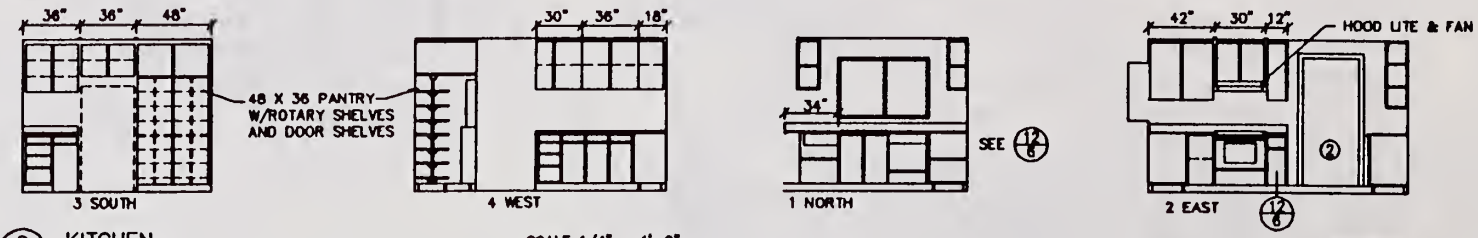


5/3 REAR ELEVATION
SCALE 1/8" = 1'-0"

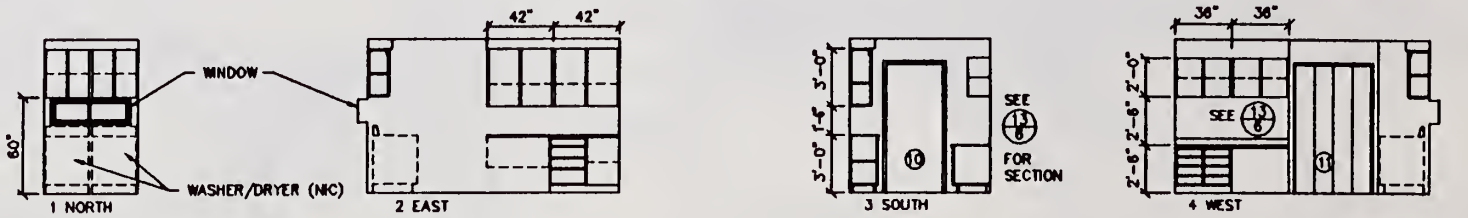


8/3 PORCH ● WALL
SCALE 3/4" = 1'-0"

7/3 RETAINING WALL BENCH (NIC)
SCALE 3/4" = 1'-0"



9/3 KITCHEN
SCALE 1/4" = 1'-0"



12/3 UTILITY ROOM
SCALE 1/4" = 1'-0"

AS020003
DECEMBER, 1987

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
FORE[illegible]S — 6
Northwest Region

Drawn
Design
Checked
Reviewed

Forest: OCHOCO NATIONAL FOREST
Project: STANDARD 270R
3 BDRM RESIDENCE – Region 6
RANGER RESIDENCES

ELEVATIONS SECTIONS & DE[illegible]

Sht 3
Of

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DOOR SCHEDULE

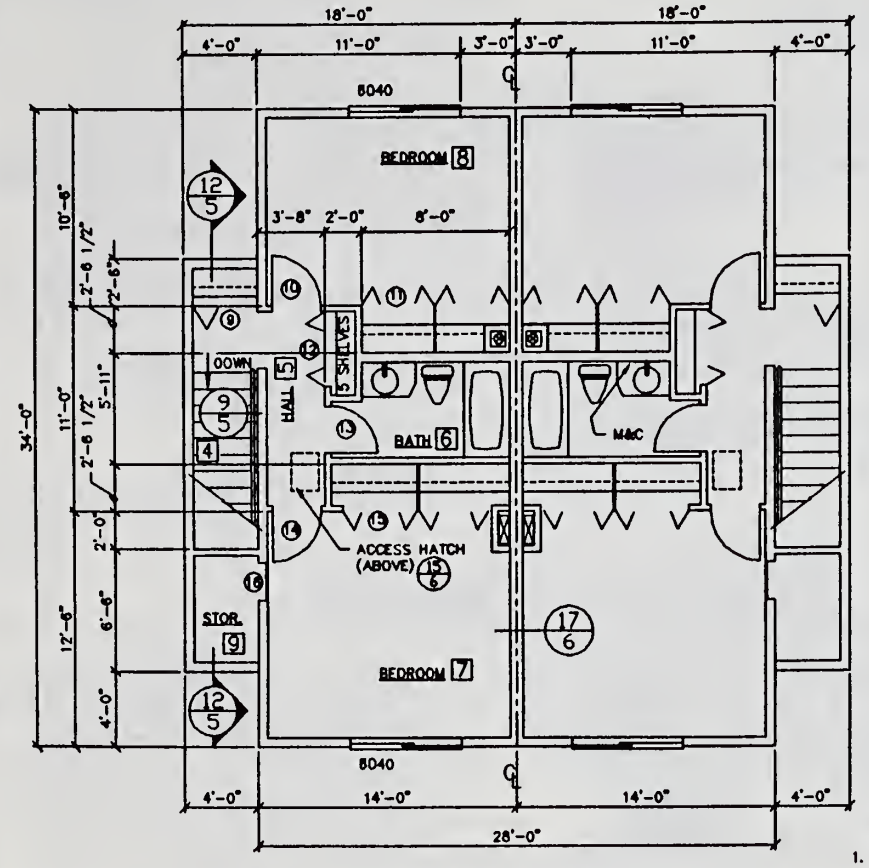
NO.	SIZE	MAT'L	TYPE	HDW	FINISH	FRAME	FINISH	DETAILS	REMARKS
1	3'-0" X 6'-8" X 1 3/4"	HM	A	1	ENAMEL	MTL	ENAMEL	9/6 SW,4/6,5/6	INSUL.-WEATHERSTRIP
2	3'-0" X 6'-8" X 1 3/4"	HM	A	1	ENAMEL	MTL	ENAMEL	9/6 SW,5/6 SW	INSUL.-WEATHERSTRIP
3	3'-0" X 6'-8" X 1 3/8"		B	4	STAIN	WOOD	STAIN		BIFOLD
4	3'-0" X 6'-8" X 1 3/4"	HM	A	1	ENAMEL	WOOD	ENAMEL	9/6 SW,4/6,5/6	INSUL.-WEATHERSTRIP
5	6'-0" X 6'-8" X	ALUM	C		FACTORY	ALUM	FACTORY	6/6	ALUM. GLASS SLIDER
6									
7	5'-0" X 6'-0" X 1 3/4"	WOOD	A	2	STAIN	WOOD	STAIN	10/6, 8/6	PAIR OF DOORS
8									
9	3'-0" X 6'-8" X 1 3/8"	WOOD	B	4	STAIN	WOOD	STAIN		BIFOLD
10	2'-8" X 6'-8" X 1 3/4"	WOOD	A	3	STAIN	WOOD	STAIN	10/6	
11	8'-0" X 6'-8" X 1 3/8"	WOOD	B	4	STAIN	WOOD	STAIN		BIFOLD
12	4'-0" X 6'-8" X 1 3/8"	WOOD	B	4	STAIN	WOOD	STAIN		BIFOLD
13	2'-6" X 6'-8" X 1 3/4"	WOOD	A	3	STAIN	WOOD	STAIN	10/6, 8/6	
14	2'-8" X 6'-8" X 1 3/4"	WOOD	A	3	STAIN	WOOD	STAIN	10/6	
15	8'-0" X 6'-8" X 1 3/8"	WOOD	B	4	STAIN	WOOD	STAIN		BIFOLD
16	2'-0" X 3'-0"	WOOD			STAIN	WOOD	STAIN		STOR. ACCESS DOOR
17	9'-0" X 7'-0"	WOOD			ENAMEL	WOOD	PAINT		OVERHEAD DOOR
18									
19									

DOOR TYPES



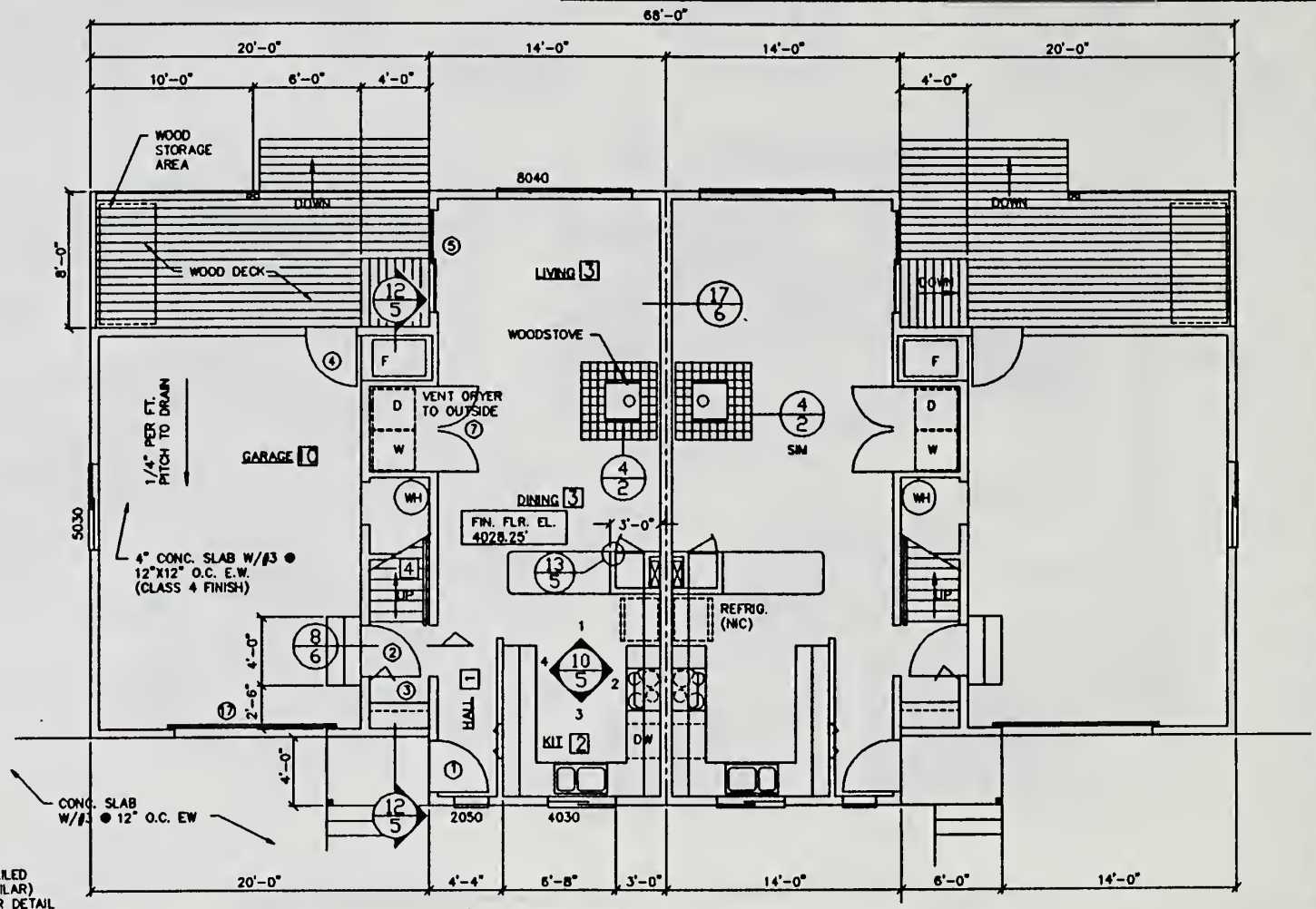
ROOM FINISH SCHEDULE

	ROOM	FLOOR	BASE	WALLS	CEILING	HEIGHT	REMARKS
		PLYWOOD - CARPET 3" CONC. SLAB-SEALED PLYWOOD - SHT. VINYL	RUBBER BASE 4" WOOD	1/2" GYP BD. - PAINTED 5/8 TYPE X GYP.BD.-PT.	1/2" GYP. BD. 5/8" TYPE "X" GYP BOARD EXPOSED STRUCTURE		
1	ENTRY HALL	●	●	●	●	7'-9"	
2	KITCHEN		●	●	●	7'-9"	
3	DINING/LIVING	●		●	●	7'-9"	
4	STAIRWAY	●	●	⊠	●	VARIES	
5	HALL		●	●	●	7'-9"	
6	BATH		●	●	●	7'-9"	
7	BEDROOM	●		●	●	7'-9"	
8	BEDROOM	●		●	●	7'-9"	
9	STORAGE		●	●	●	VARIES	
10	GARAGE		●	⊠	●	8'-0"	
11							



2/4 UPPER FLOOR
SCALE 1/4" = 1'-0"

NOTE
1. LEFT SIDE DETAILED (RIGHT SIDE SIMILAR)
2. SEE SHT. 6 FOR DETAIL COMMON TO BOTH BLDGS.



1/4 LOWER FLOOR
SCALE 1/4" = 1'-0"

AS020004
JANUARY, 1988

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
R-6
The Pacific Northwest Region

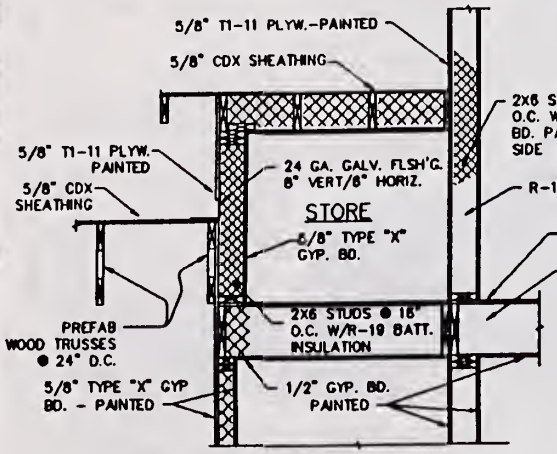
Drawn
Design
Checked
Reviewed

Forest: OCHOCO NATIONAL FOREST
Project: RANGER RESIDENCES

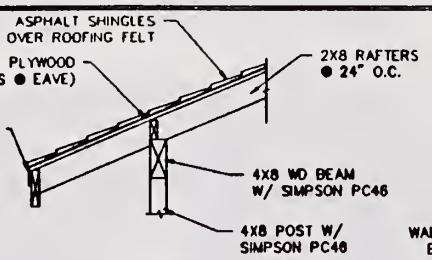
2 BDRM 2 STORY J95
R-6 STANDARD DUPLEX
LOWER AND UPPER FLOOR PLANS

Sht 4
Of

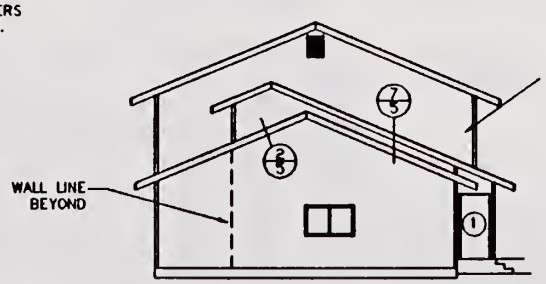
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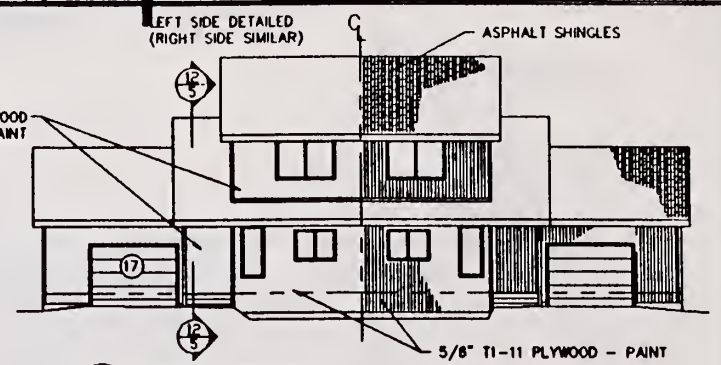
7/5 ROOF/FLOOR @ STAIRWELL
SCALE 3/4" = 1'-0"



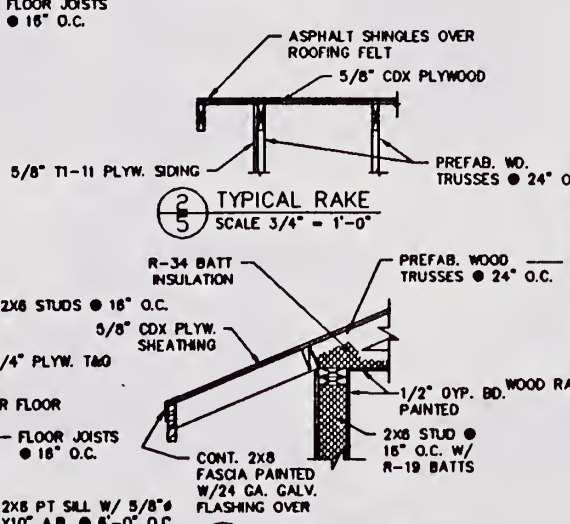
1/5 EAVE @ BEAM
SCALE 3/4" = 1'-0"



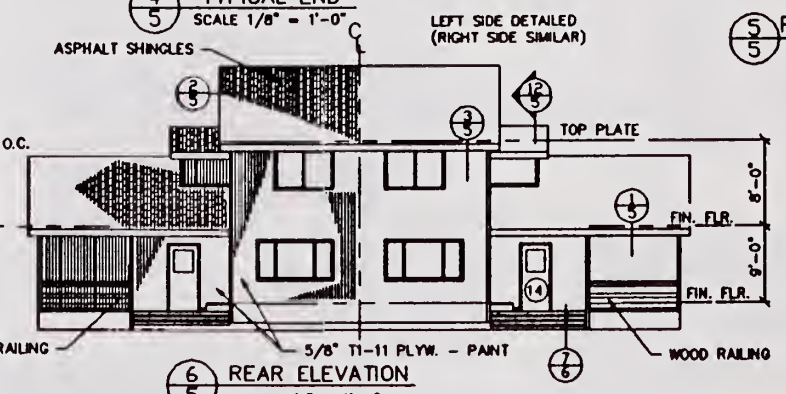
4/5 TYPICAL END
SCALE 1/8" = 1'-0"



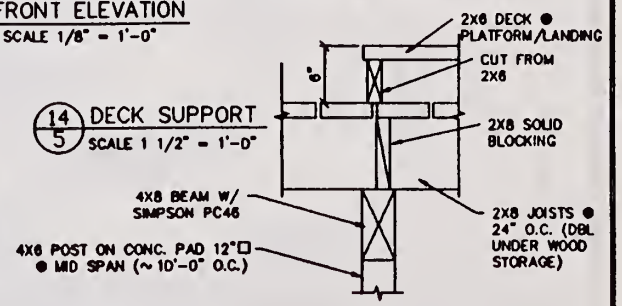
5/5 FRONT ELEVATION
SCALE 1/8" = 1'-0"



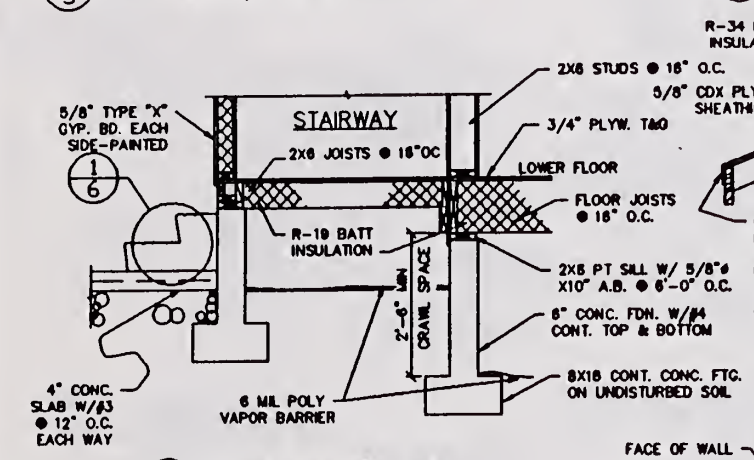
2/5 TYPICAL RAKE
SCALE 3/4" = 1'-0"



6/5 REAR ELEVATION
SCALE 1/8" = 1'-0"

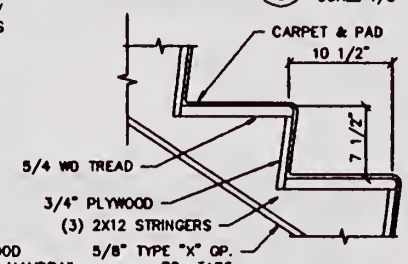


14/5 DECK SUPPORT
SCALE 1 1/2" = 1'-0"

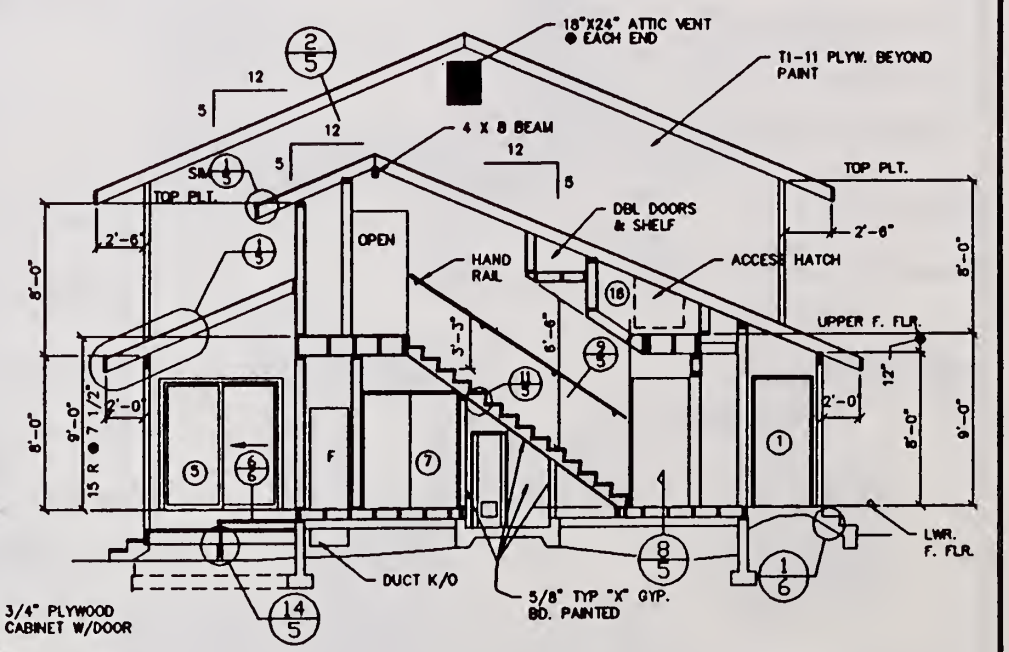


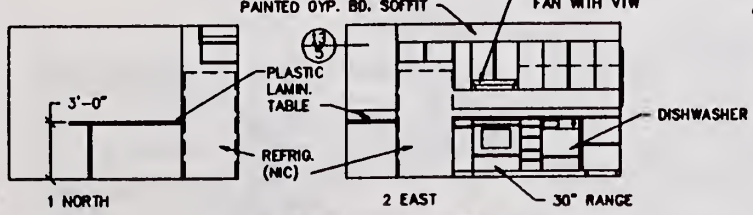
8/5 FOUNDATION @ STAIR
SCALE 3/4" = 1'-0"

3/5 TYP. EAVE
SCALE 3/4" = 1'-0"

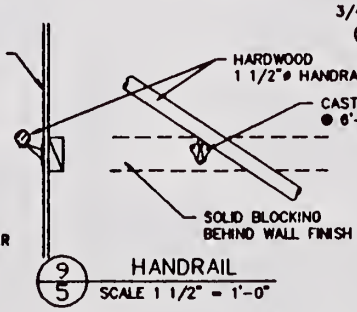


11/5 STAIR TREAD
SCALE 1 1/2" = 1'-0"

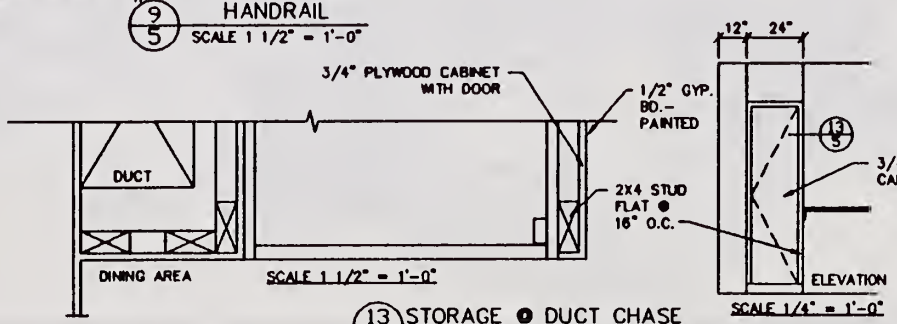




10/5 KITCHEN [2] SCALE 1/4" = 1'-0"



9/5 HANDRAIL
SCALE 1 1/2" = 1'-0"



13/5 STORAGE @ DUCT CHASE

AS020005
JANUARY, 1988

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
R-6
Pacific Northwest Region

Drawn
Design
Checked
Reviewed

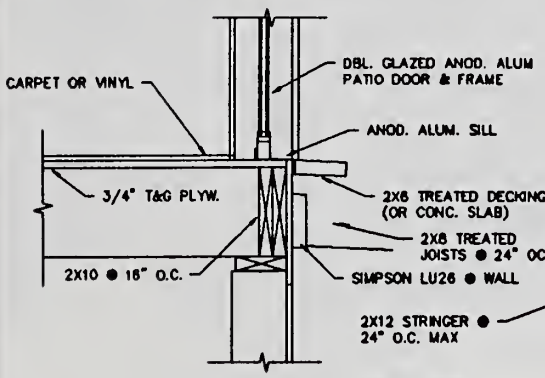
Forest: OCHOCO NATIONAL FOREST

Project: RANGER RESIDENCES

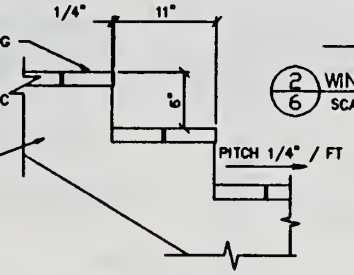
2 BDRM 2 STORY 395
R-6 STANDARD DUPLEX
ELEVATIONS, DETAILS &

Sht 5
Of

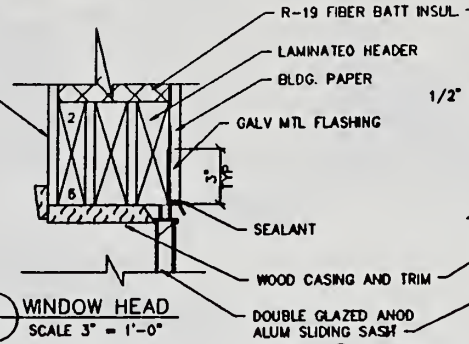
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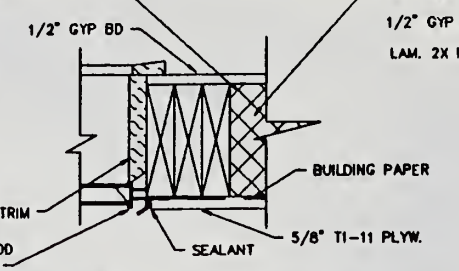
6/6 SLIDING DOOR @ DECK
SCALE 1 1/2" = 1'-0"



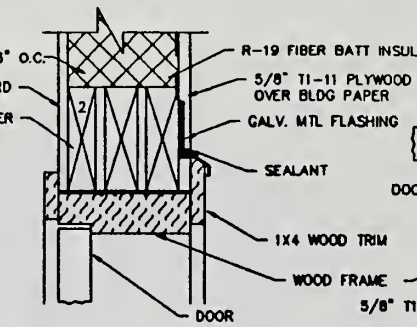
7/6 WOOD STAIR
SCALE 1 1/2" = 1'-0"



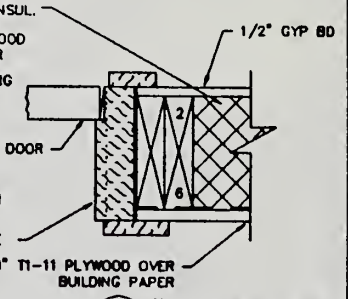
2/6 WINDOW HEAD
SCALE 3" = 1'-0"



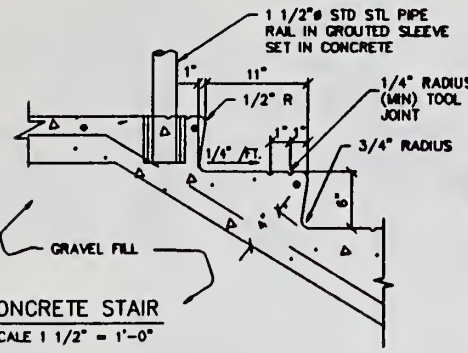
3/6 WINDOW JAMB
SCALE 3" = 1'-0"



4/6 EXT. DOOR HEAD
SCALE 3" = 1'-0"



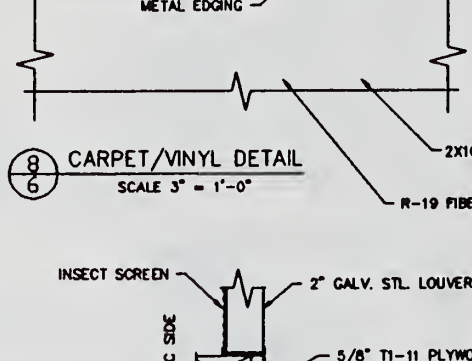
5/6 EXT. DOOR JAMB
SCALE 3" = 1'-0"



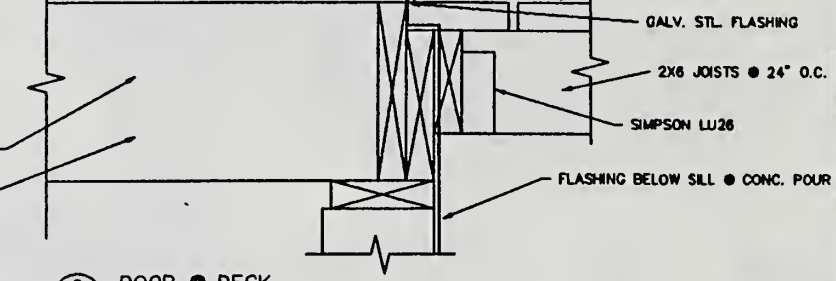
1/6 CONCRETE STAIR
SCALE 1 1/2" = 1'-0"



16/6 CRAWL SPACE ACCESS
SCALE 3" = 1'-0"

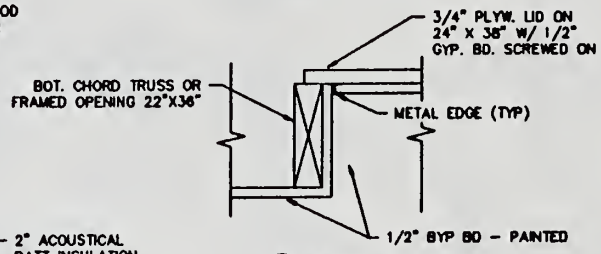


8/6 CARPET/VINYL DETAIL
SCALE 3" = 1'-0"

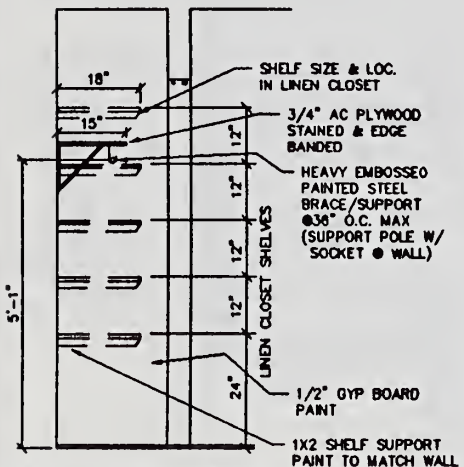


9/6 DOOR @ DECK
SCALE 3" = 1'-0"

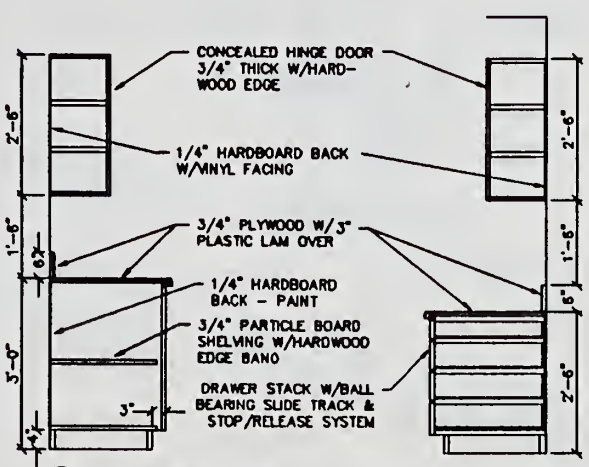
14/6 ATTIC LOUVER
SCALE 3" = 1'-0"



15/6 ATTIC ACCESS
SCALE 3" = 1'-0"

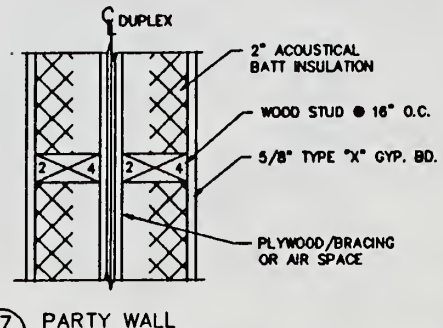


11/6 CLOSET SECTION
SCALE 3/4" = 1'-0"

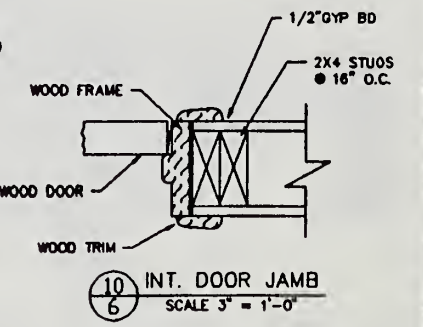


12/6 CABINET SECTION
SCALE 3/4" = 1'-0"

13/6 CABINET SECTION
SCALE 3/4" = 1'-0"



17/6 PARTY WALL
SCALE 3" = 1'-0"



10/6 INT. DOOR JAMB
SCALE 3" = 1'-0"

AS020006
JANUARY, 1988

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
R-6
The Pacific Northwest Region

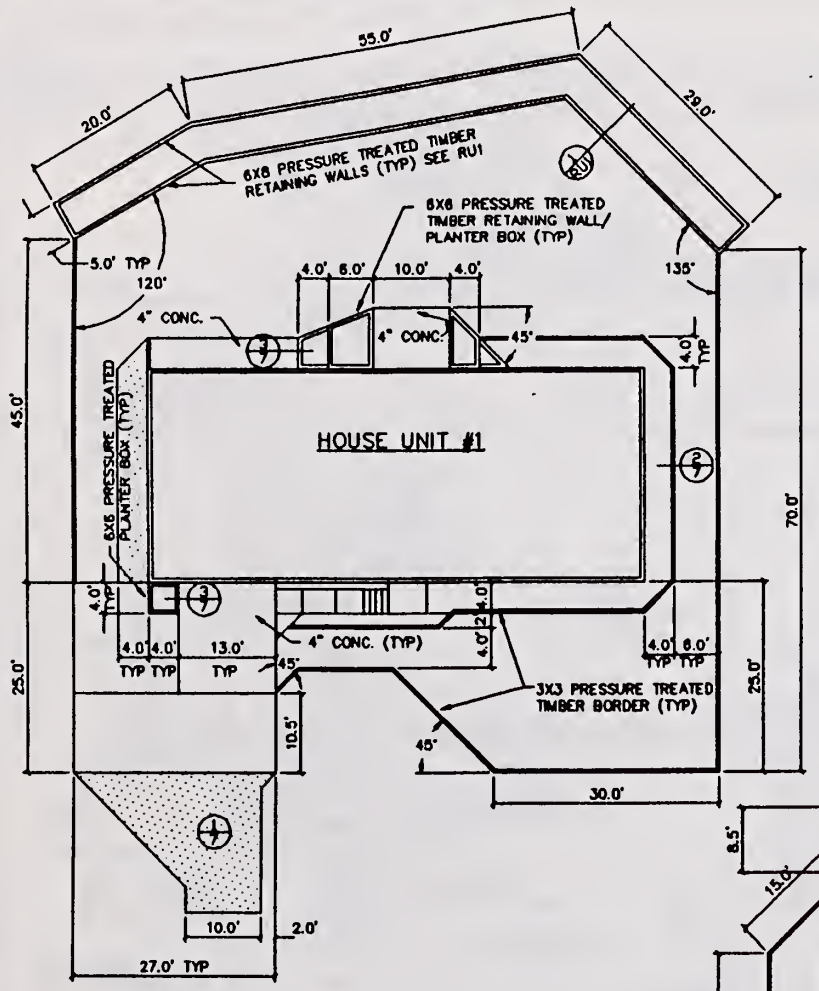
Drawn
Design
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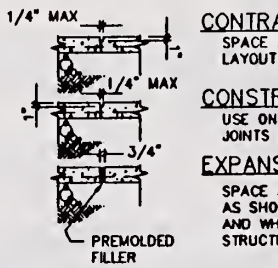
Forest: OCHOCO NATIONAL FOREST
Project: RANGER RESIDENCES

MISCELLANEOUS DETAILS

Sht 6 Of

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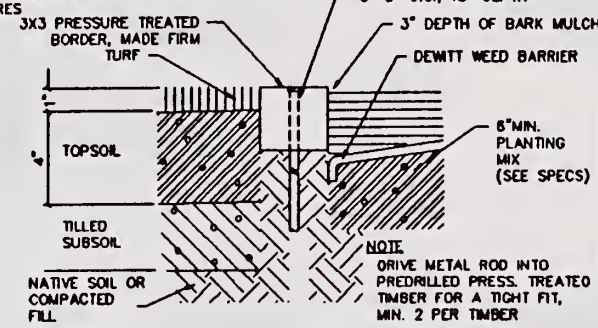


CONTRACTION JOINT
SPACE AS SHOWN ON LAYOUT PLAN

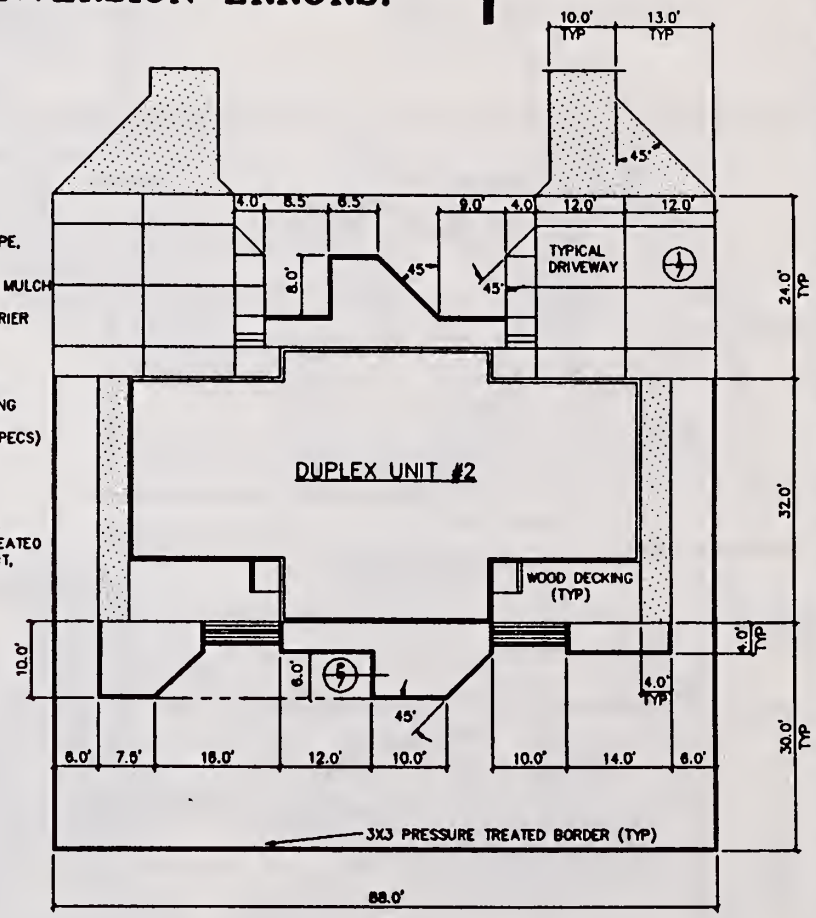
CONSTRUCTION JOINT
USE ONLY WHERE CONTRACTION JOINTS WOULD OCCUR

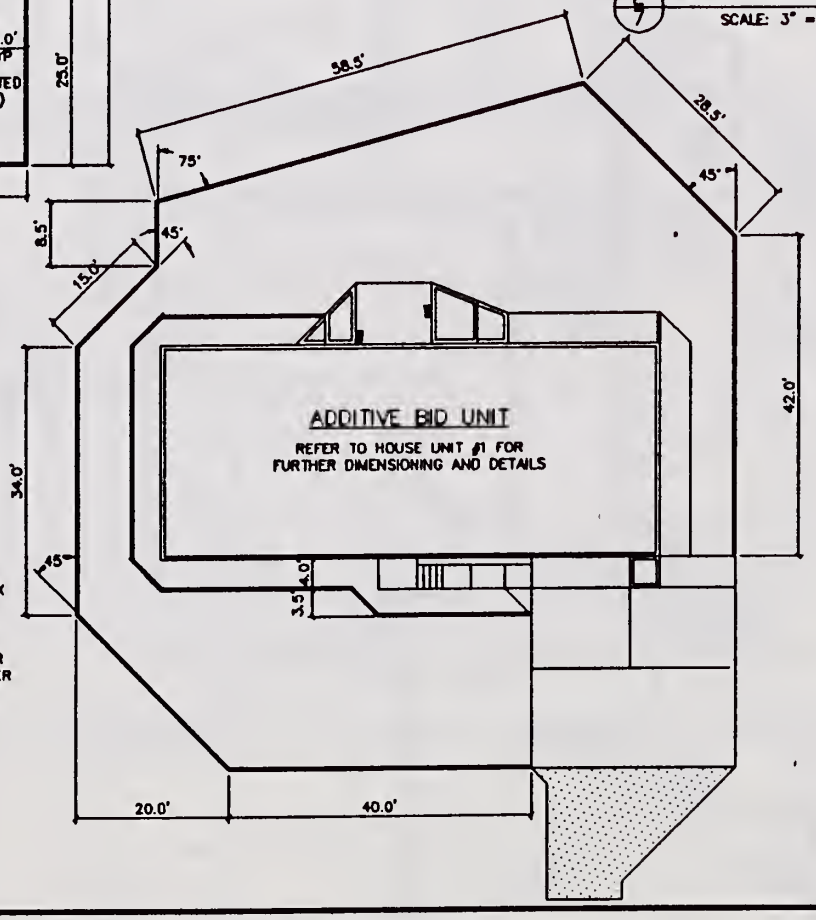
EXPANSION JOINT
SPACE AT 20' MAX. AND AS SHOWN ON LAYOUT PLAN AND WHERE ABUTTING STRUCTURES

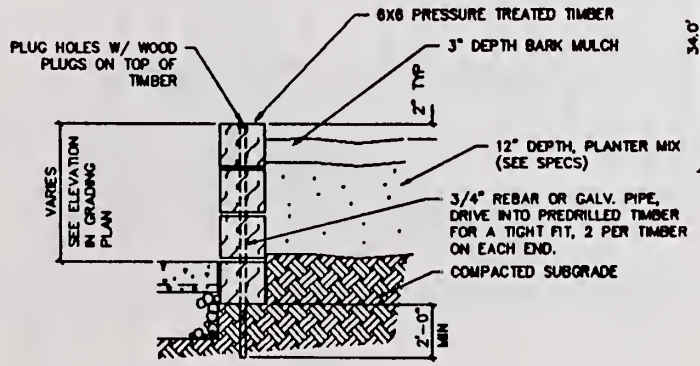
1/7 CONCRETE JOINTS
SCALE: NONE



2/7 TIMBER BORDER DETAIL
SCALE: 3" = 1'-0"







3/7 PLANTER BOX DETAIL
SCALE: 1" = 1'-0"

GENERAL NOTES

1. ALL WRITTEN DIMENSIONS SHALL PREVAIL
2. REPORT ALL LAYOUT DISCREPANCIES IMMEDIATELY TO F.S. C.O.R. FOR DECISION
3. THE CONTRACTOR (OR HIS REPRESENTATIVE) SHALL STAKE THE LAYOUT PLAN IN THE FIELD (SITE) AND HAVE SUCH STAKING (INCLUDING GRADE STAKES) APPROVED BY F.S. C.O.R. BEFORE PROCEEDING WITH CONSTRUCTION.
4. EQUIPMENT AND MATERIALS SHALL REMAIN WITHIN CONSTRUCTION LIMIT LINES.
5. ASPHALT AREA

AS020007
JANUARY, 1988

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
6
Northwest Region

Drown
Design
Checked
Reviewed

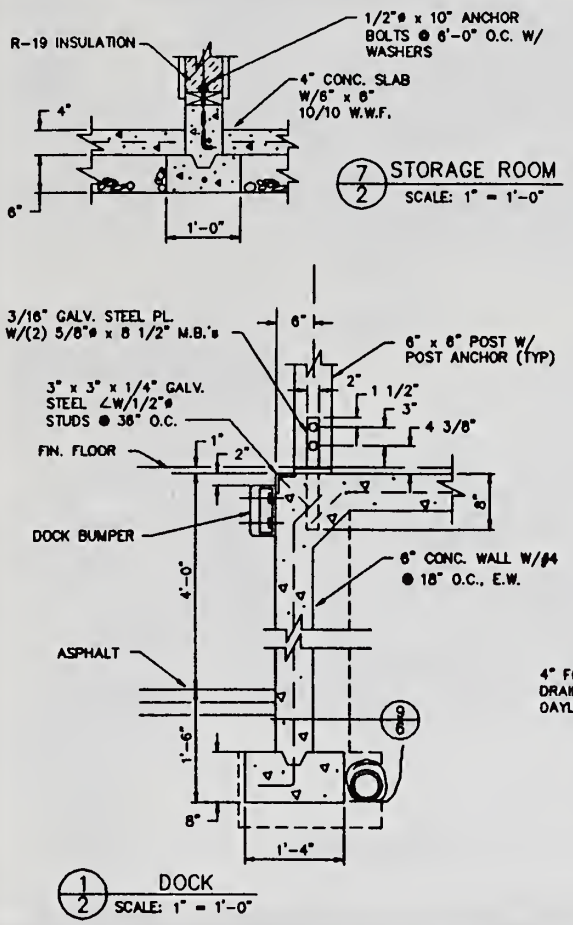
Forest
OCHOCO NATIONAL FOREST

Project
RANGER RESIDENCES

HOUSING LAYO

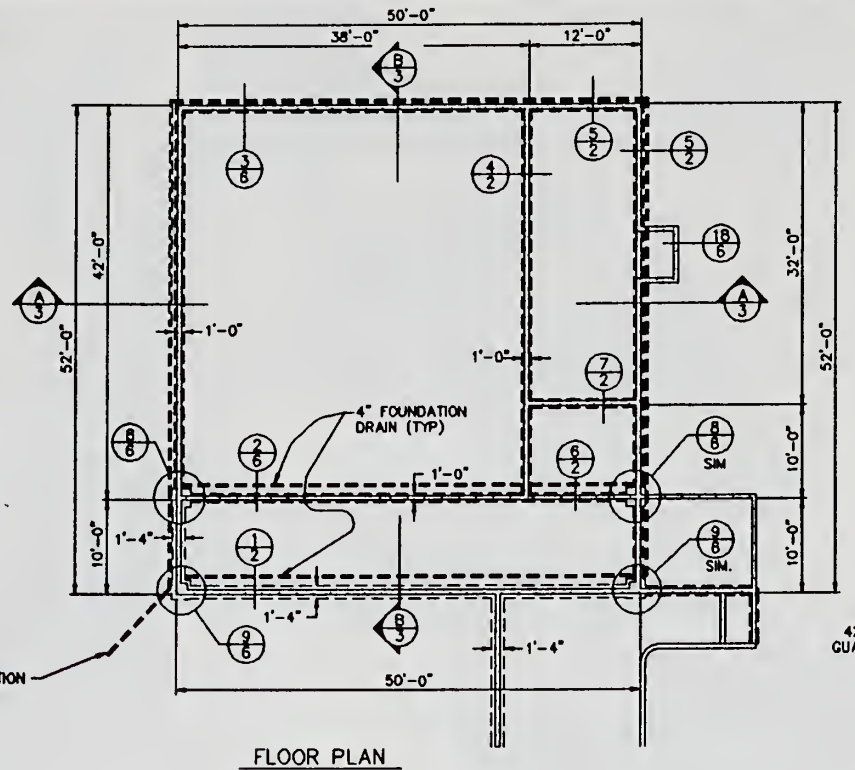
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Of

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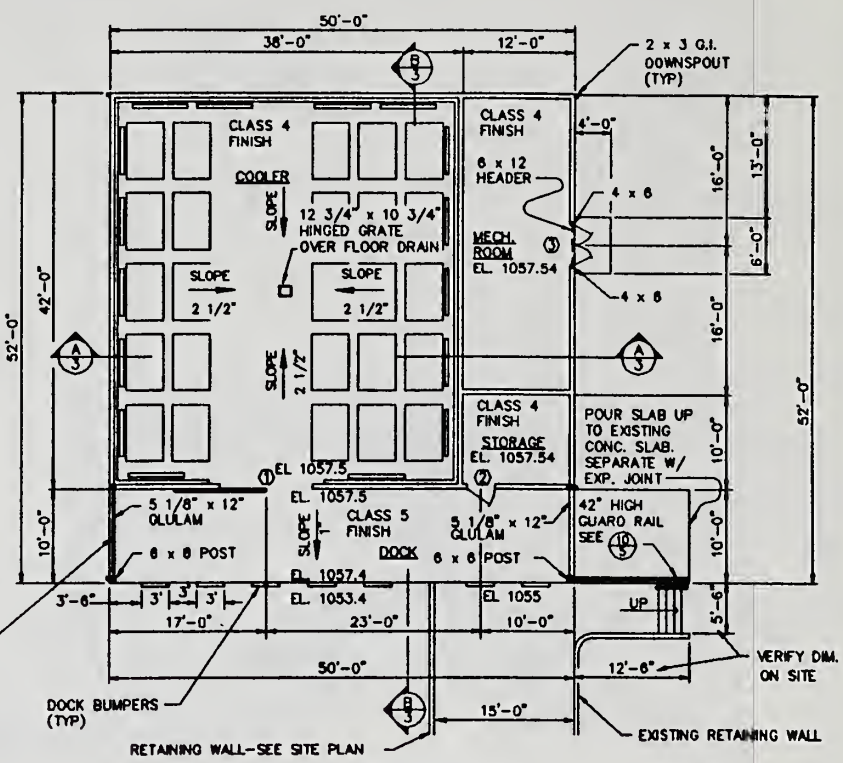


7/2 STORAGE ROOM
SCALE: 1" = 1'-0"

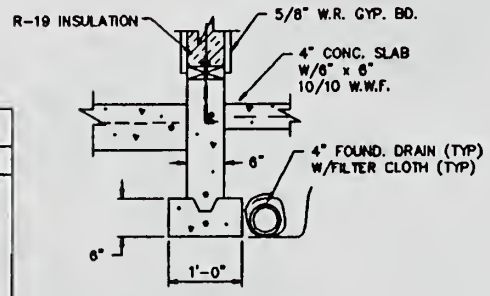
1/2 DOCK
SCALE: 1" = 1'-0"



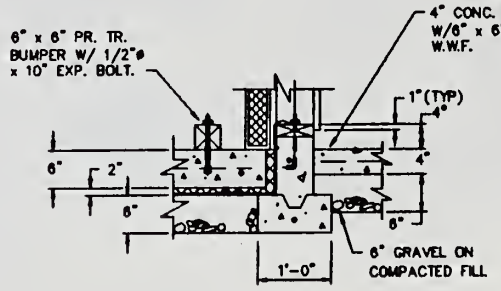
FLOOR PLAN
SCALE: 1/8" = 1'-0"



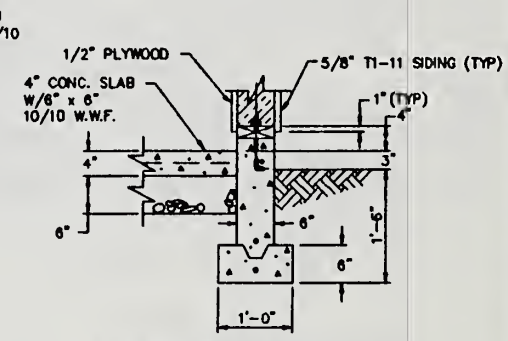
FOUNDATION PLAN
SCALE: 1/8" = 1'-0"



6/2 STORAGE ROOM
SCALE: 1" = 1'-0"



4/2 MECHANICAL & STORAGE
SCALE: 1" = 1'-0"



5/2 MECHANICAL & STORAGE
SCALE: 1" = 1'-0"

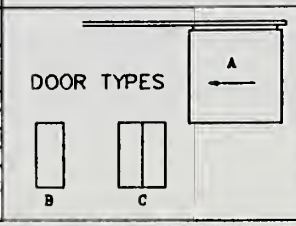
ROOM FINISH SCHEDULE

ROOM	FLOOR	BASE	WALLS	CEILING	HEIGHT	REMARKS
	4" CONC. SLAB	6" CONC. SLAB	CONCRETE	BUILT-UP METAL - COATED	1/2" PLYWOOD - PAINTED	1/2" PLYWOOD - PAINTED	5/8" W.R. GYPSUM BOARD	1/2" PLYWOOD - COATED	5/8" W.R. GYPSUM BOARD		
COOLER	•			•	•		•			16'-6"	
MECHANICAL	•		•		•			•		16'-6"	
STORAGE	•		•			•			•	8'-0"	INSULATED

NOTE:
1. STORAGE ROOM INSULATION: WALLS R-19, CEILING R-30.

WINDOW & DOOR SCHEDULE

NO.	SIZE	MAT'L	TYPE	HDW	FINISH	FRAME	FINISH	DETAILS	REMARKS
(1)	10'-0" x 10'-0"	METAL	A		ENAMEL	METAL	ENAMEL	(1-4)(2-4)(3-4)	COOLER DOOR
(2)	3'-0" x 7'-0" x 1 3/4"	H.M.	B		ENAMEL	METAL	ENAMEL	(5-4)(6-4)(7-4)	
(3)	2 - 2'-6" x 7'-0" x 1 3/4"	H.M.	C		ENAMEL	METAL	ENAMEL	(8-4)(10-4)(11-4)	
(4)	10'-0" x 10'-0" OPENING	VINYL							IMPACT TRAFFIC DOOR



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FOREST SERVICE
UMPQUA NATIONAL FOREST
THE PACIFIC NORTHWEST REGION

TILLER TREE COOLER

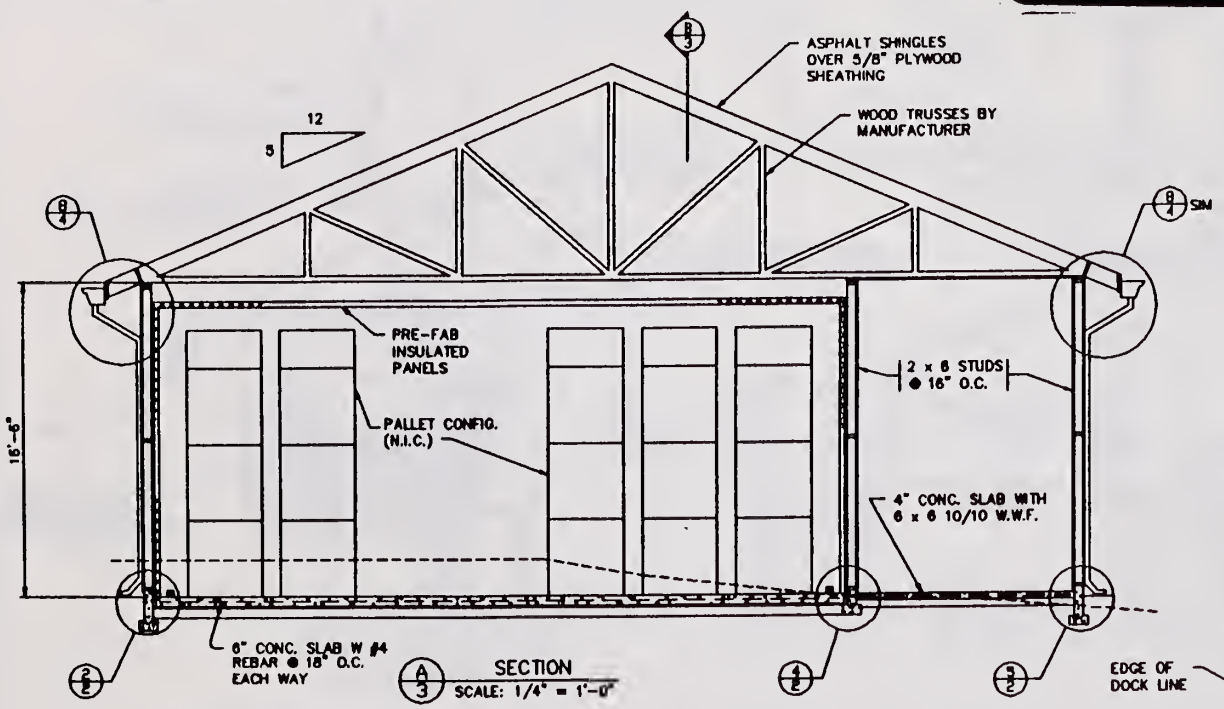
AS060002
NOV. 16, '67

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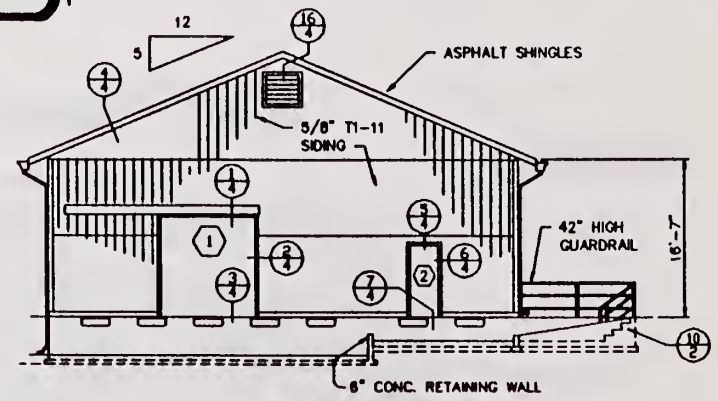
FOUNDATION, FLOOR PLAN AND DETAILS

SHT. 2 OF

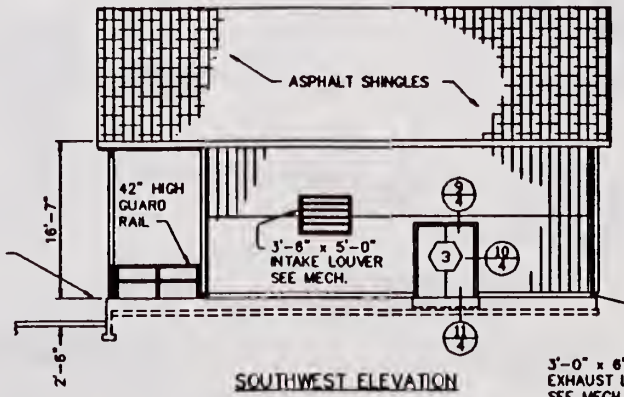
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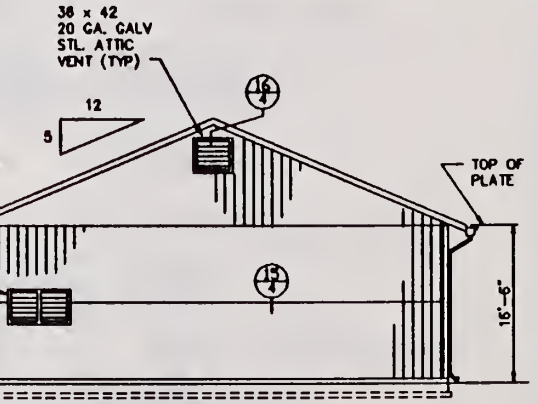
SECTION
SCALE: 1/4" = 1'-0"



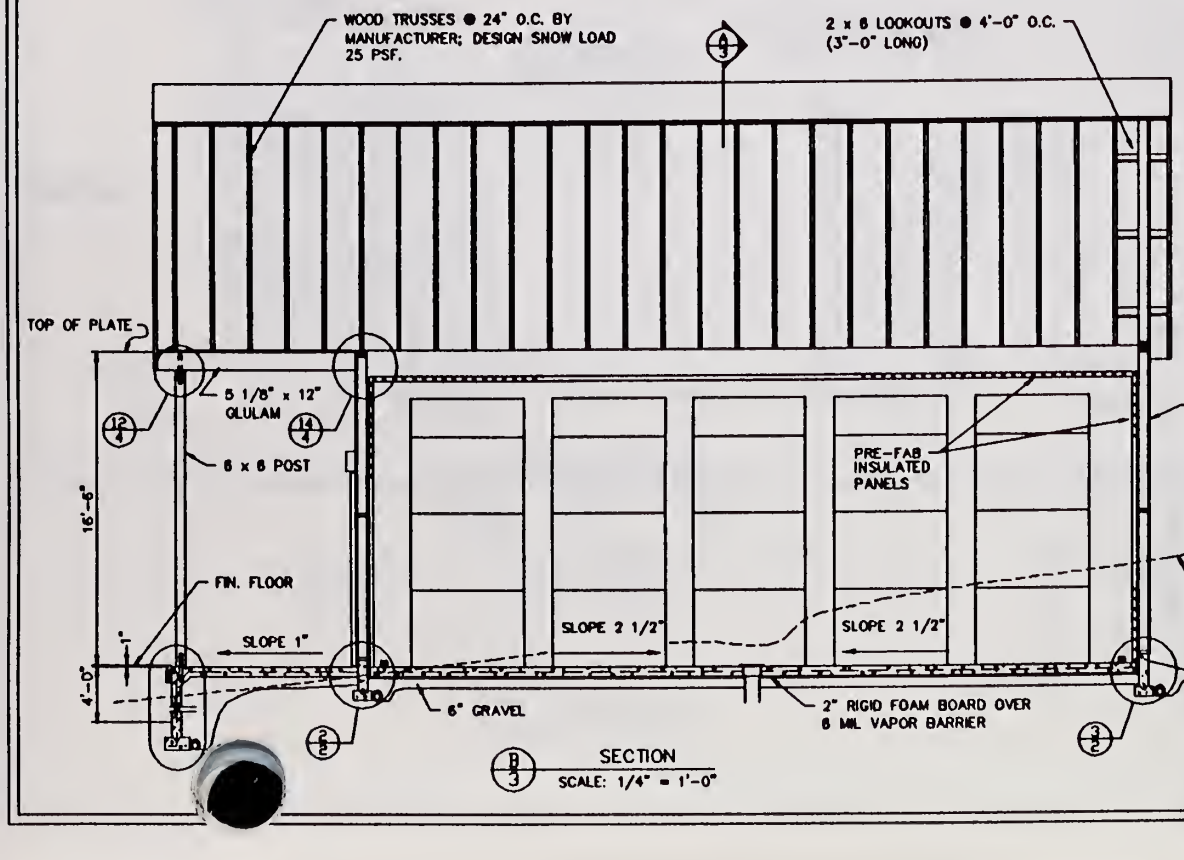
NORTHWEST ELEVATION
SCALE: 1/8" = 1'-0"



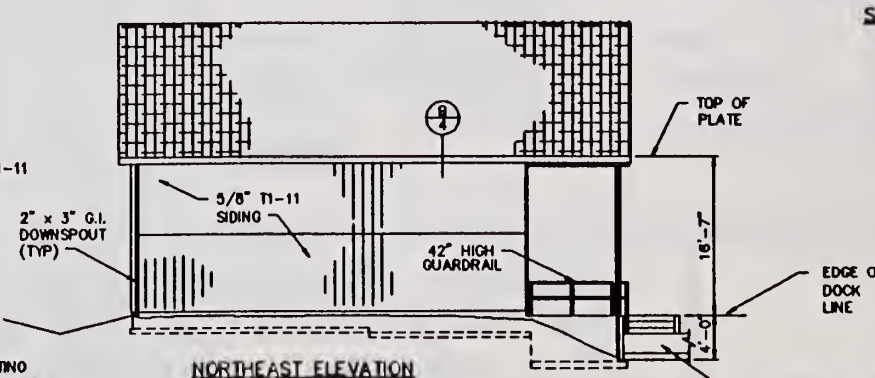
SOUTHWEST ELEVATION
SCALE: 1/8" = 1'-0"



SOUTHEAST ELEVATION
SCALE: 1/8" = 1'-0"



SECTION
SCALE: 1/4" = 1'-0"



NORTHEAST ELEVATION
SCALE: 1/8"=1'-0"

AS060003
NOV. 12, 1987

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UMPQUA NATIONAL FOREST
THE PACIFIC NORTHWEST REGION

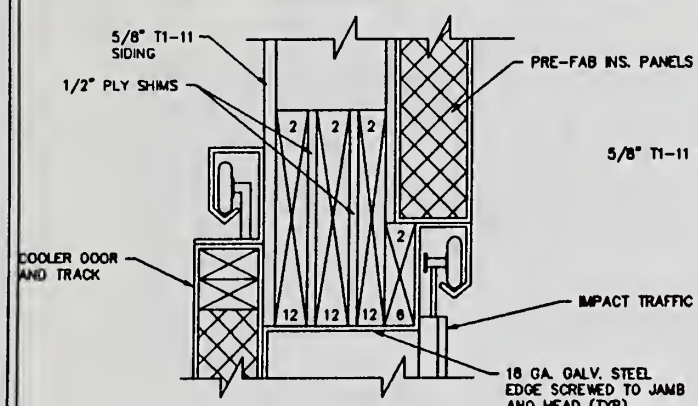
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REVIEWED ____ DATE ____

TILLER TREE COOLER

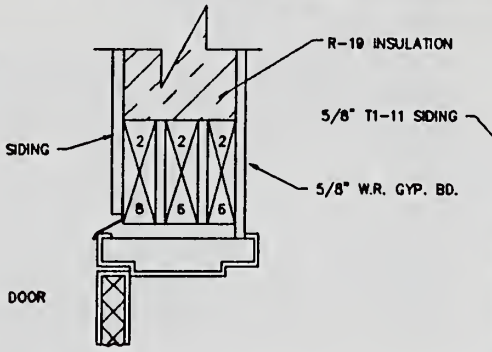
ELEVATIONS

SHT. 3
OF

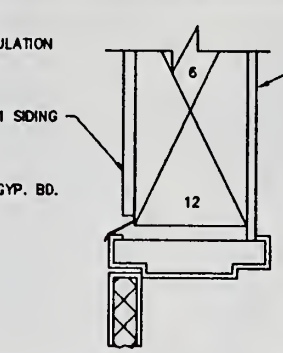
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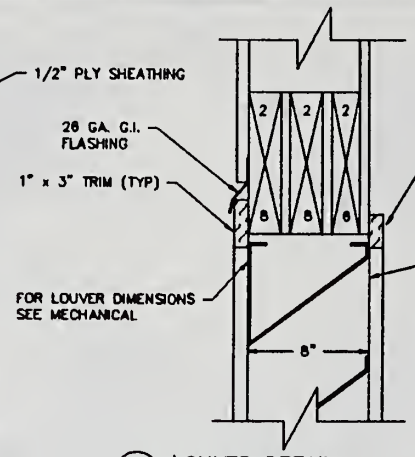
1/4 COOLER DOOR
HEAD-SCALE: 3"=1'-0"



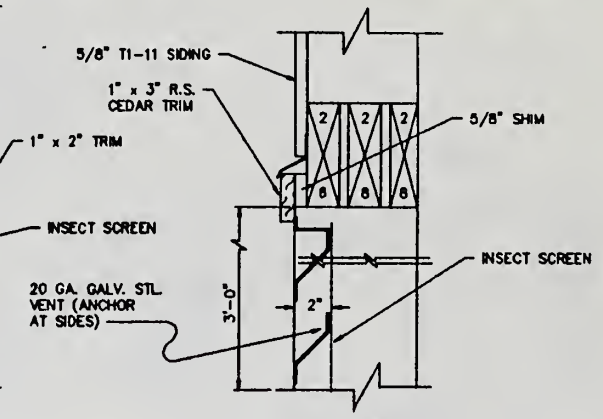
5/4 EXTERIOR DOOR
HEAD-SCALE: 3"=1'-0"



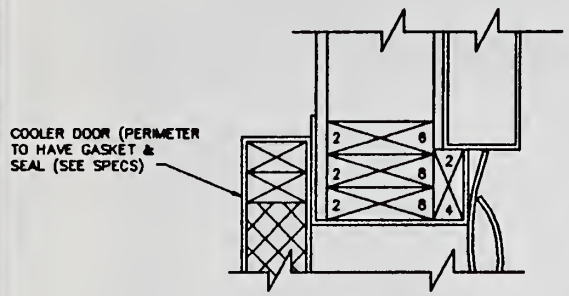
9/4 EXTERIOR DOOR
HEAD-SCALE: 3"=1'-0"



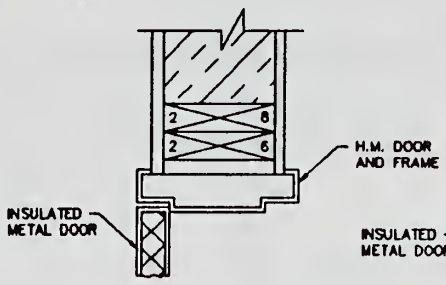
13/4 LOUVER DETAIL
HEAD-SCALE: 3"=1'-0"



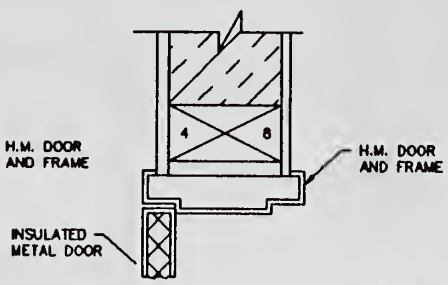
16/4 ATTIC VENT
SCALE: 3"=1'-0"



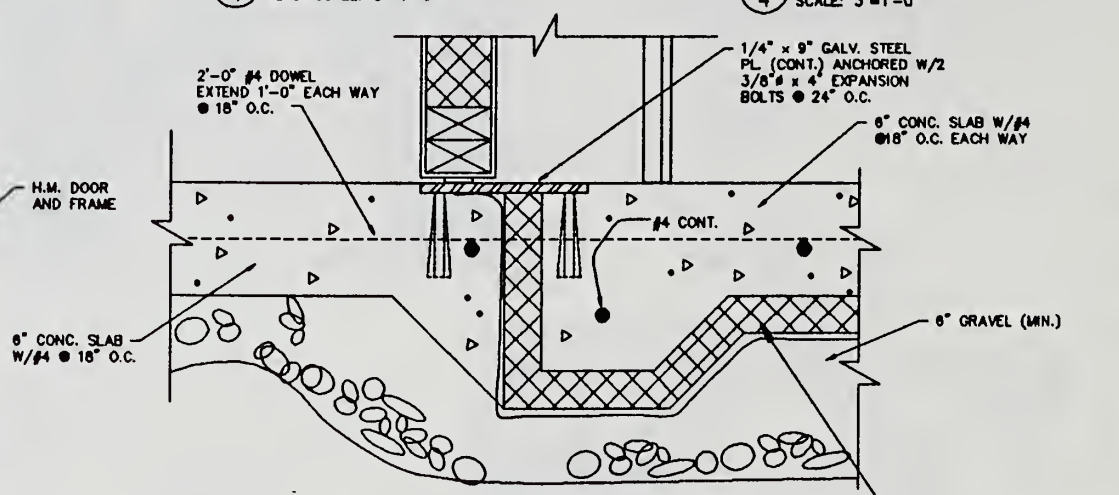
2/4 COOLER DOOR
JAMB-SCALE: 3"=1'-0"



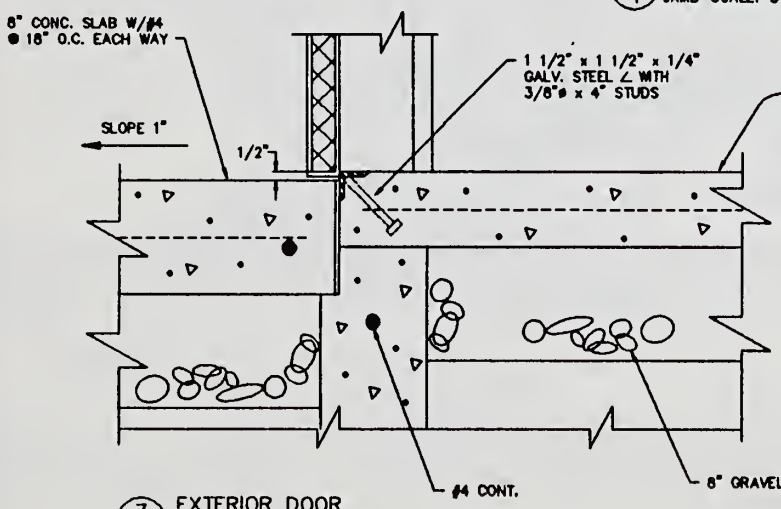
6/4 EXTERIOR DOOR
JAMB-SCALE: 3"=1'-0"



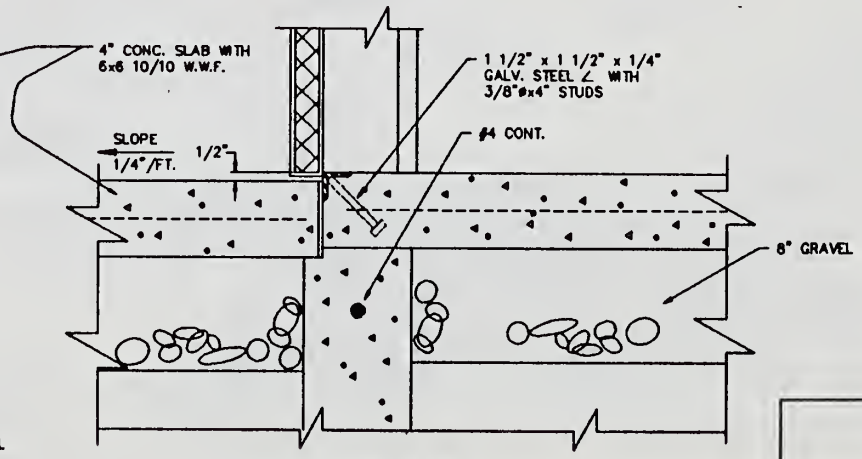
10/4 EXTERIOR DOOR
JAMB-SCALE: 3"=1'-0"



3/4 COOLER DOOR
SILL-SCALE: 3"=1'-0"



7/4 EXTERIOR DOOR
SILL-SCALE: 3"=1'-0"

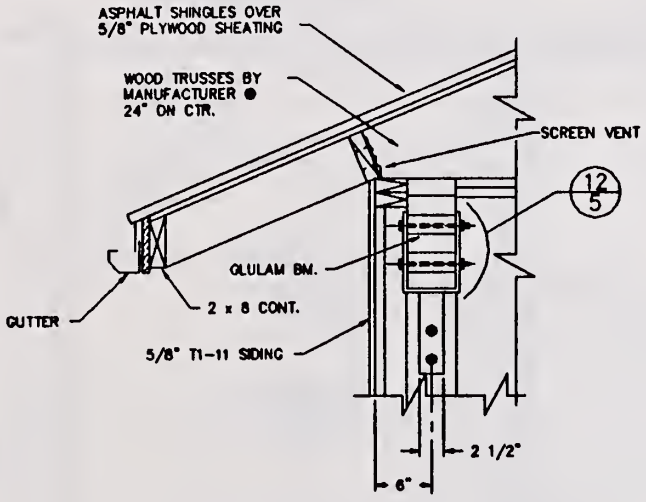


11/4 EXTERIOR DOOR
SILL-SCALE: 3"=1'-0"

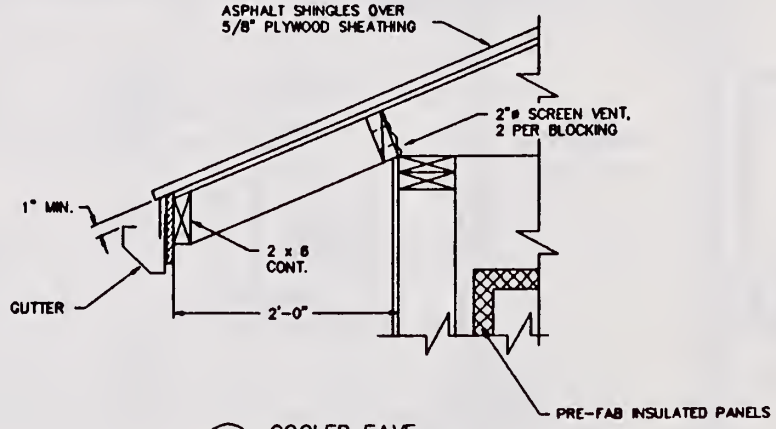
AS080004
NOV. 13,1987

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE UMPQUA NATIONAL FOREST THE PACIFIC NORTHWEST REGION	TILLER TREE COOLER
DRAWN DATE DESIGNED DATE CHECKED DATE REVISED DATE	DETAILS SHT. 4 OF

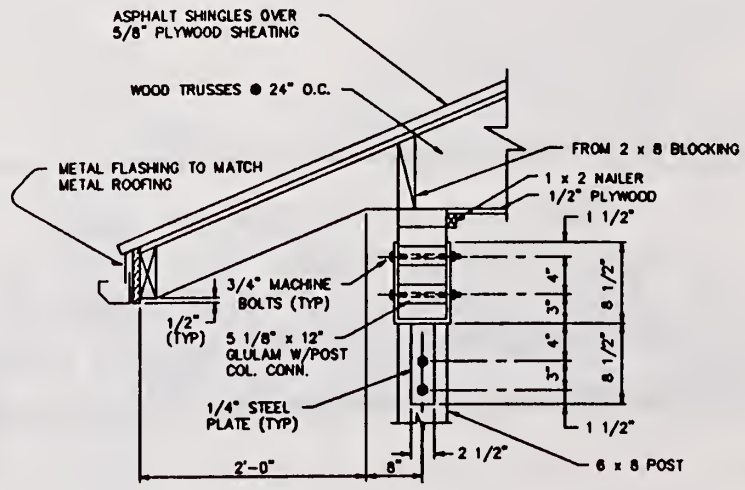
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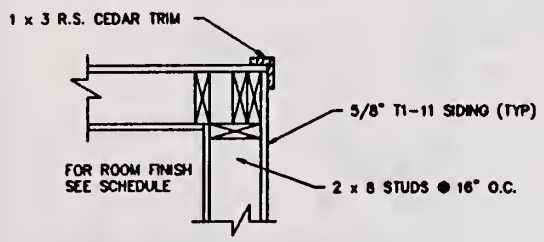
14/5 EAVE @ DOCK
SCALE: 1 1/2" = 1'-0"



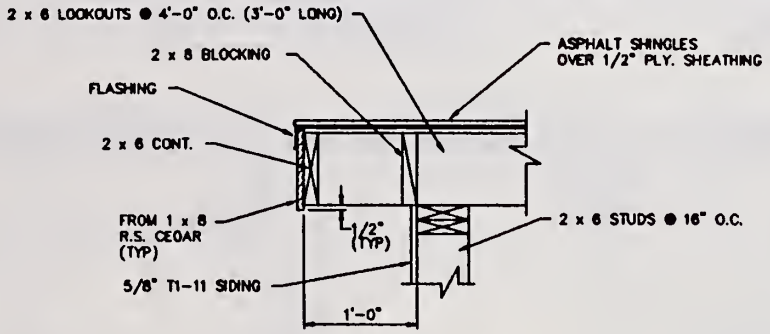
8/5 COOLER EAVE
SCALE: 1 1/2" = 1'-0"



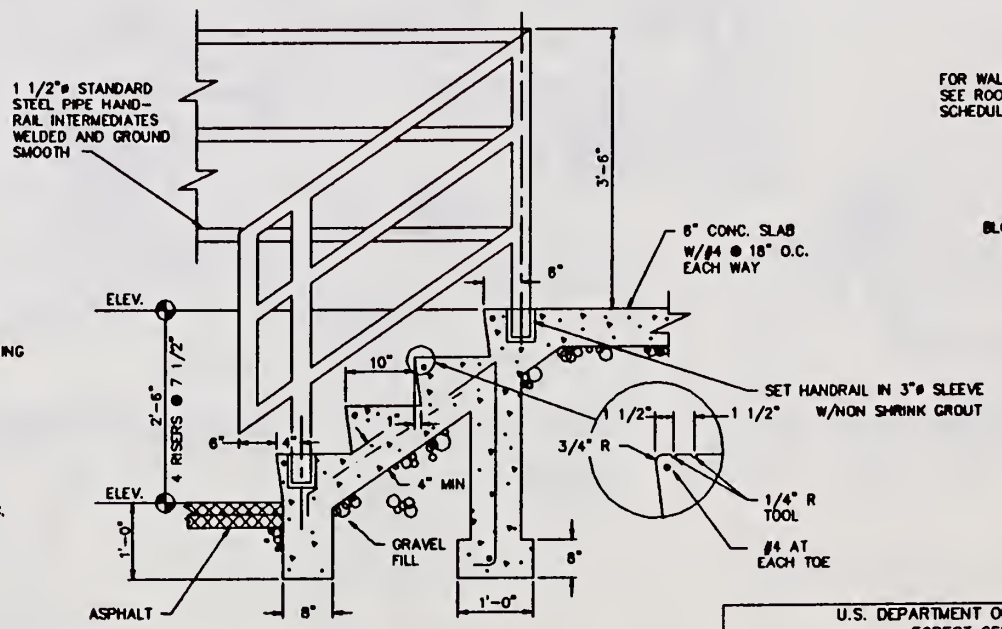
12/5 EAVE @ DOCK
SCALE: 1 1/2" = 1'-0"



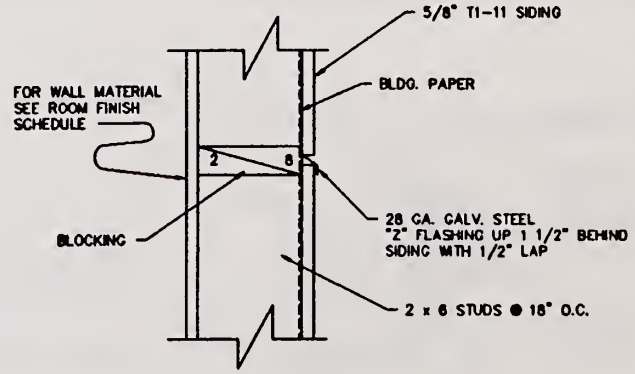
17/5 TYPICAL CORNER
SCALE: 1 1/2" = 1'-0"



4/5 TYPICAL RAKE
SCALE: 1 1/2" = 1'-0"



10/5 STAIR @ DOCK
1" = 1'-0"



15/5 "Z" FLASHING
SCALE: 3" = 1'-0"

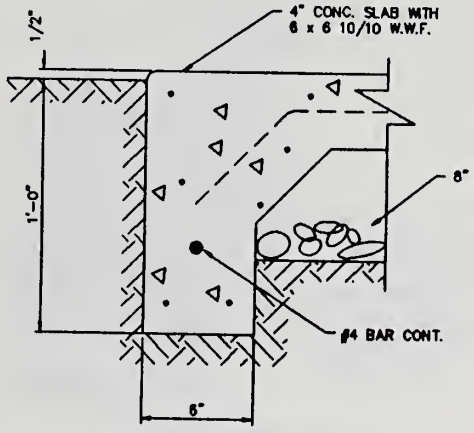
AS060005
NOV. 17, 1987

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
UMPQUA NATIONAL FOREST
THE PACIFIC NORTHWEST REGION

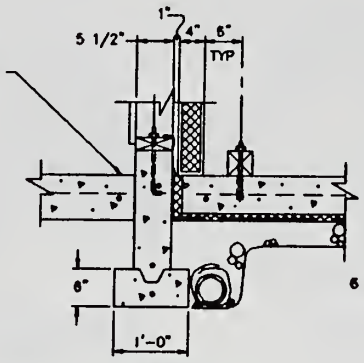
TILLER TREE COOLER

DRAWN ____ DATE ____
DESIGNED ____ DATE ____
CHECKED ____ DATE ____
REVIEWED ____ DATE ____

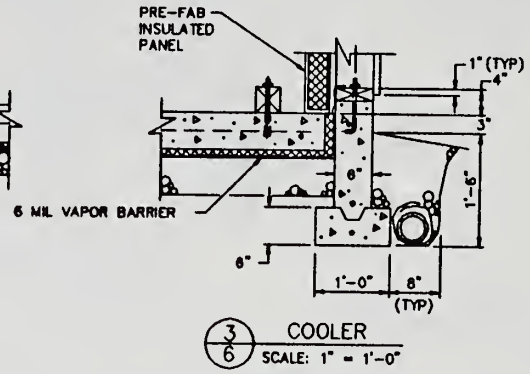
SHT. 5
OF



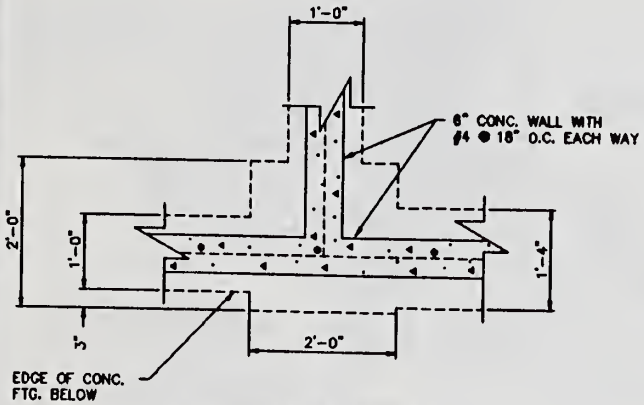
18/6 LANDING DETAIL
SCALE: 3" = 1'-0"



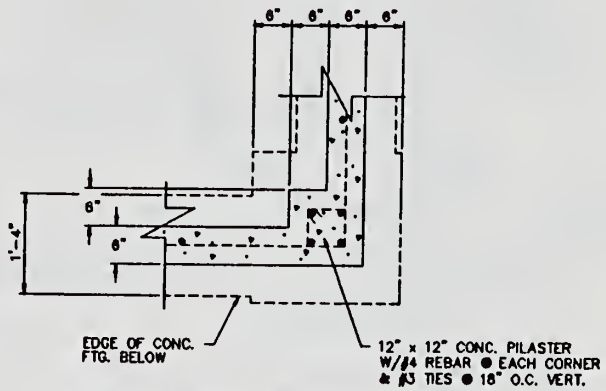
2/6 COOLER
SCALE: 1" = 1'-0"



3/6 COOLER
SCALE: 1" = 1'-0"



8/6 FOUNDATION DETAIL
SCALE: 1" = 1'-0"



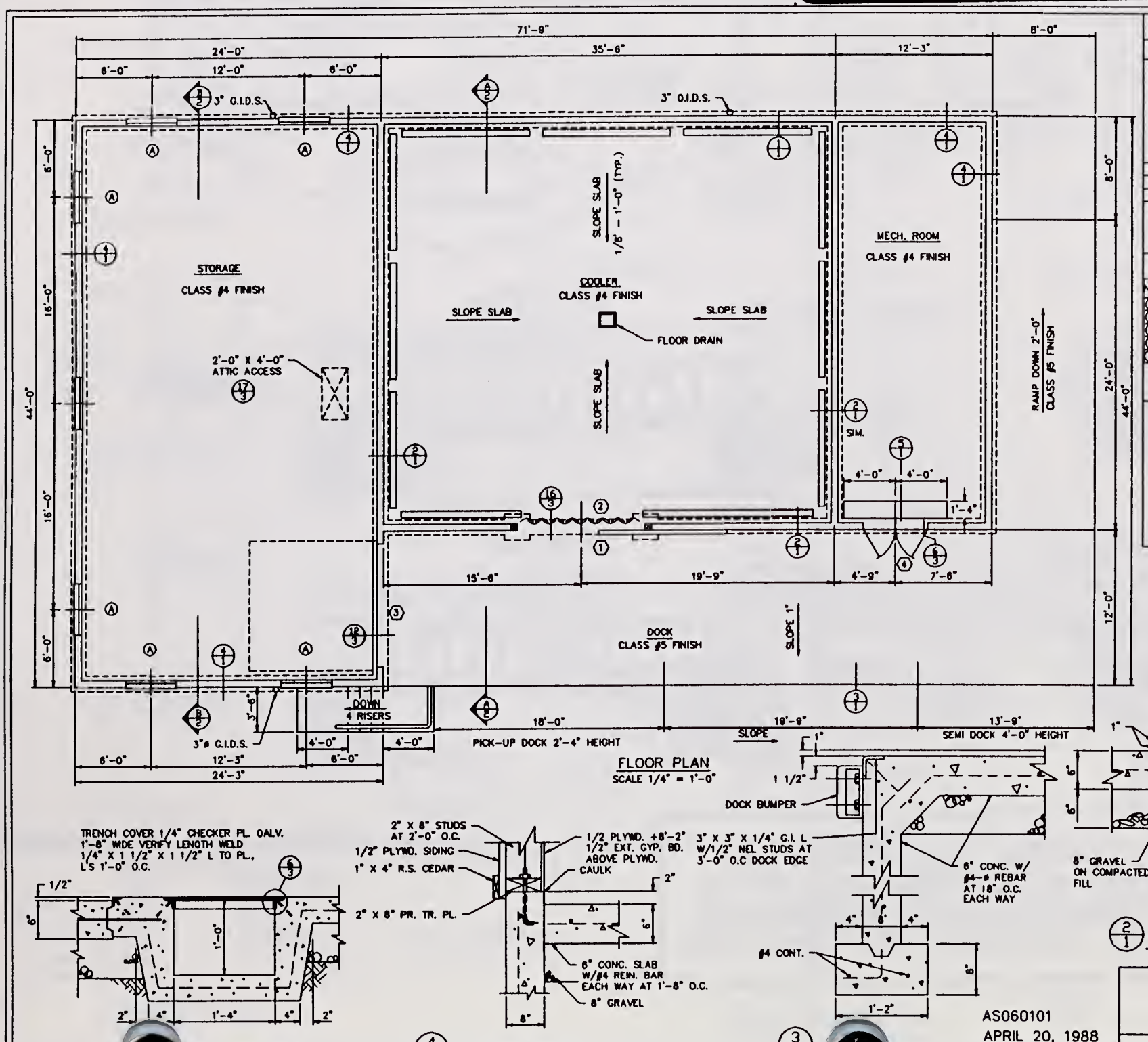
9/6 CONCRETE PILASTER
SCALE: 1" = 1'-0"

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AS060006
NOV. 17, 1987

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE UMPQUA NATIONAL FOREST THE PACIFIC NORTHWEST REGION	TILLER TREE COOLER
DRAWN DATE DESIGNED DATE CHECKED DATE REVIEWED DATE	DETAILS SHT. 6 OF

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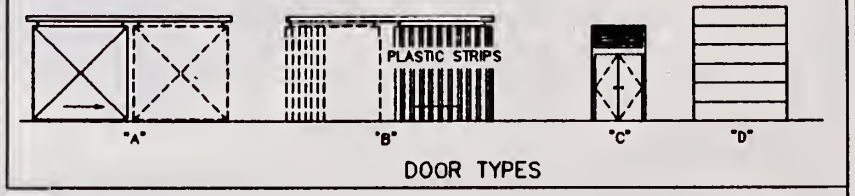
FLOOR PLAN
SCALE 1/4" = 1'-0"

ROOM FINISH SCHEDULE

ROOM	FLOOR	BASE	WALLS	CEILING	HEIGHT	REMARKS
	4" CONC. SLAB / 6" CONC. SLAB	BUILT - UP METAL / CONCRETE	1/2" PLYWOOD LOWER 8'-0" / 1/2" GYP. BD. UPPER 4'-0" GYPSUM BOARD SMTG.	1/2" PLYWOOD GYPSUM BOARD SMTG. / EXPOSED STRUCTURE		
COOLER		●	●	●	12'-0"	COATED PLYWOOD
MECHANICAL	●		●	●	12'-0"	CLEAR ACRYLIC SEALER ON FLR.
STORAGE		●	●	●	12'-0"	4'-0" X 2'-0" SINGLE PANE ALUM. WDWS.

WINDOW & DOOR SCHEDULE

NO.	SIZE	TYPE	HDW	FINISH	FRAME	DETAILS	REMARKS
1	10'-0" X 10'-0" X 4"	"A" FLUSH MTL.		ENAMEL	METAL	(15/3)(16/3)(2/4)	COOLER DOOR
2	10'-0" X 10'-0" OPN'G	IMPACT PL."B"	TRACK	PLASTIC	N.A.	- - -	DOUBLE LAP
3	10'-0" X 10'-0" X 1 3/4"	"D"		ENAMEL		(11/3)(12/3)(13/3)	FLUSH PNL. OVHD SECTNL
4	(2)2'-6" X 8'-8" X 1 3/4"	"C" FLUSH MTL.		ENAMEL		(4/3)(5/3)(6/3)	
A	4'-0" X 2'-0"	OBSCURE GL.	N.A.	ANODIZED	AL.FXD.	(1/3)(2/3)(3/3)	

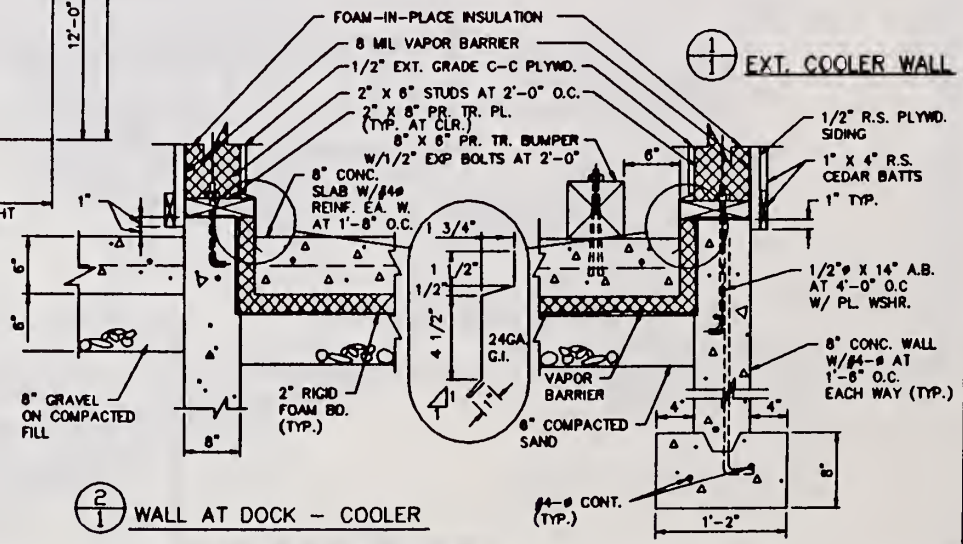


DOOR TYPES

UTILITY TRENCH

(4/1) EXT. FDN. WALL

(3/1) EDGE



(1/1) EXT. COOLER WALL

(2/1) WALL AT DOCK - COOLER

AS060101
APRIL 20, 1988

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

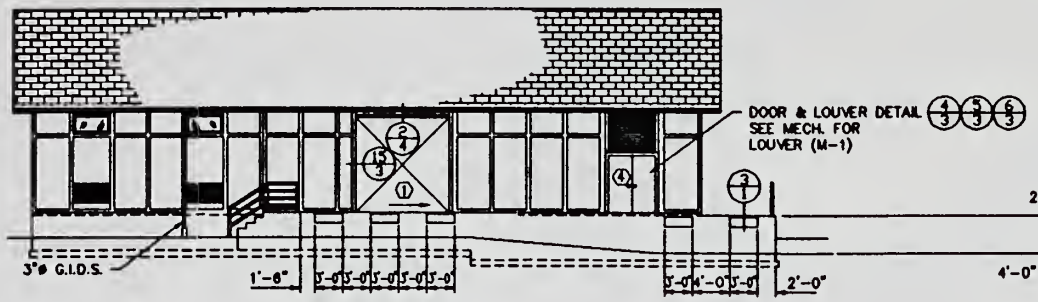
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CHECKED ____ DATE ____
REVIEWED ____ DATE ____

QUILCENE COOLER - STORAGE

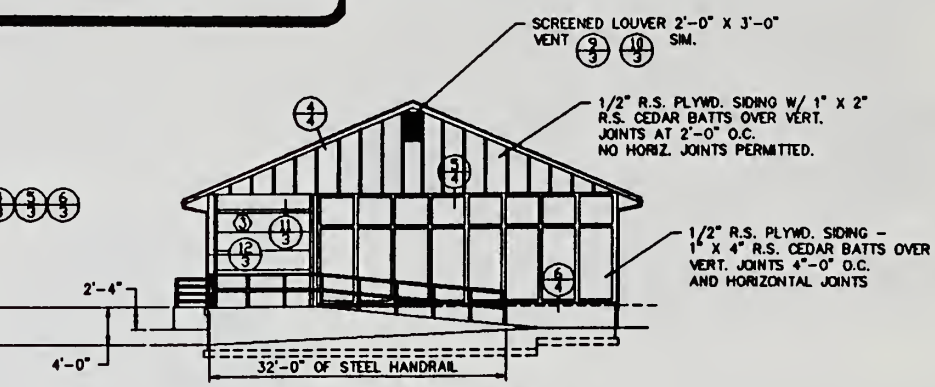
FLOOR PLAN
ROOM, DOOR & SCHEDULES
DETAILS

SHT. 1
OF

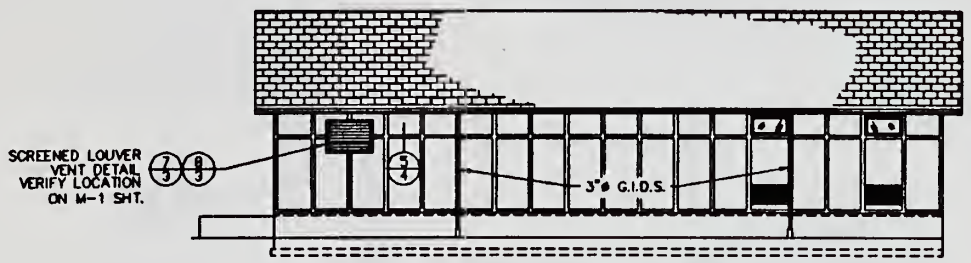
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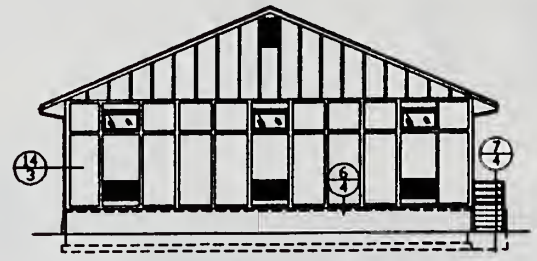
FRONT ELEVATION
SCALE 1/8" = 1'-0"



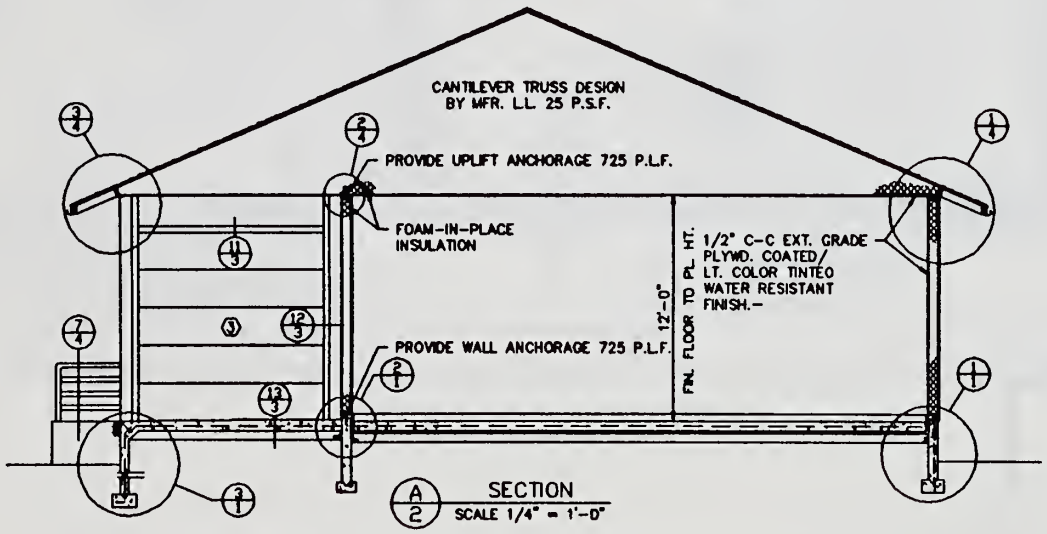
RIGHT SIDE ELEVATION



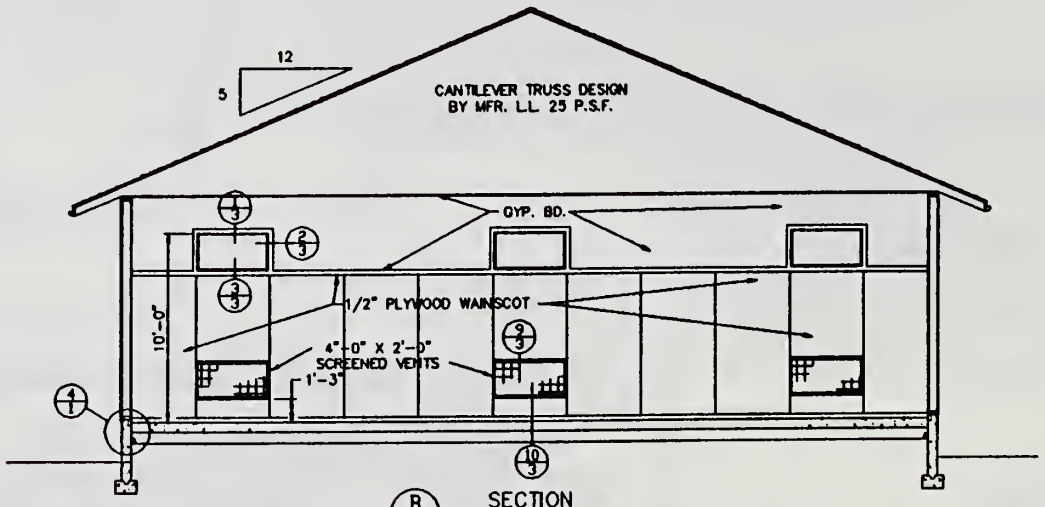
REAR ELEVATION
SCALE 1/8" = 1'-0"



LEFT SIDE ELEVATION



A/2 SECTION
SCALE 1/4" = 1'-0"



B/2 SECTION
SCALE 1/4" = 1'-0"

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AS060102
2 DEC 87

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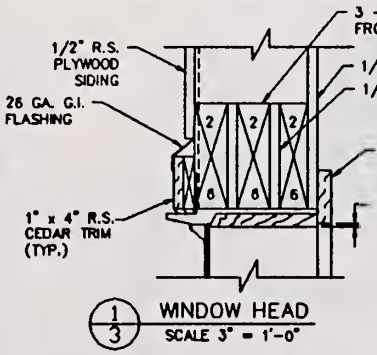
QUILCENE COOLER - STORAGE

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DESIGNED DATE
CHECKED DATE
REVIEWED DATE

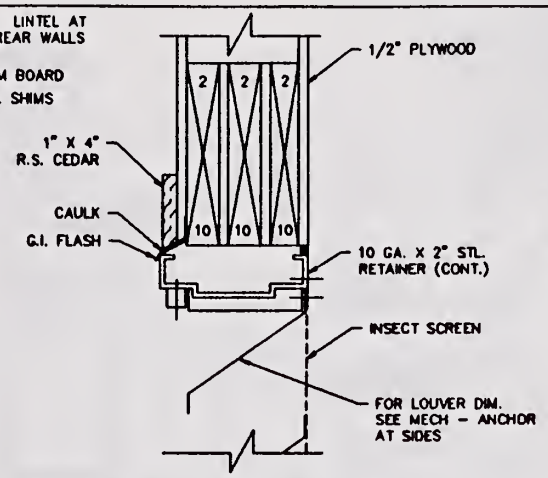
EXTERIOR ELEVATIONS AND SECTIONS

SHT. 2
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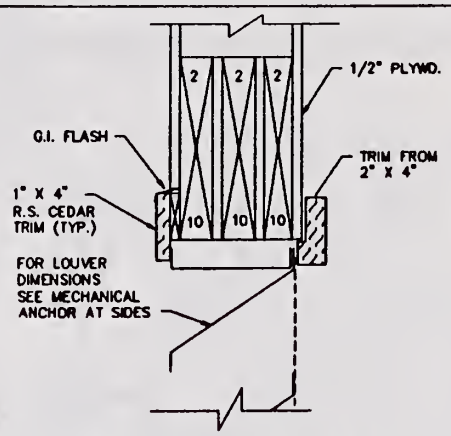
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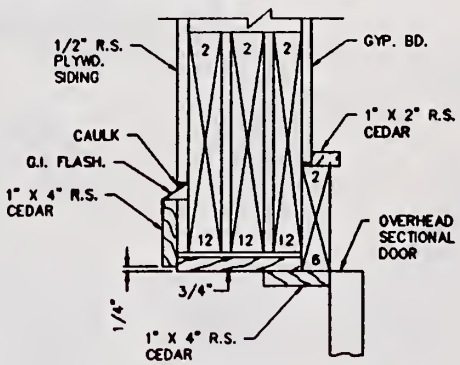
1/3 WINDOW HEAD
SCALE 3" = 1'-0"



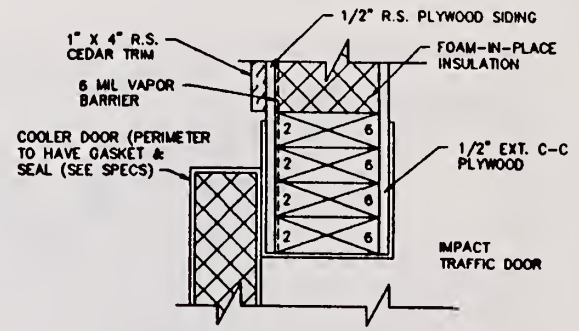
4/3 SCREENED VENT AT DOOR #4
HEAD DET. SCALE 3" =1'-0"



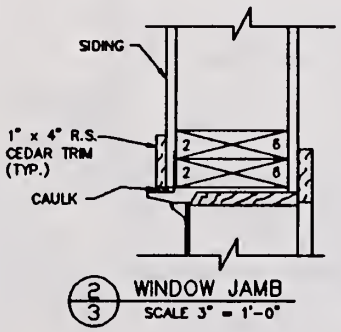
7/3 SCREENED VENT HEAD
JAMB SIMILAR SCALE 3" = 1'-0"



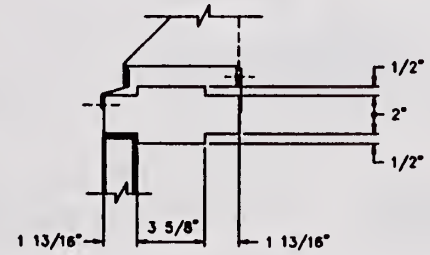
11/3 OVERHEAD DOOR DETAIL
HEAD - SCALE 3" = 1'-0"



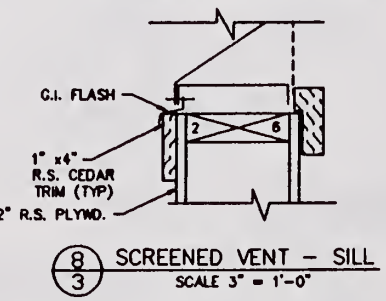
15/3 COOLER DOOR
JAMB-SCALE: 3"=1'-0"



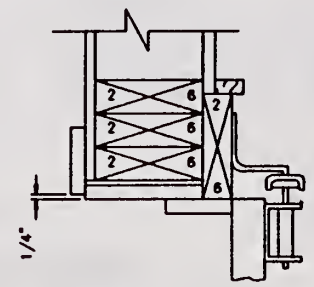
2/3 WINDOW JAMB
SCALE 3" = 1'-0"



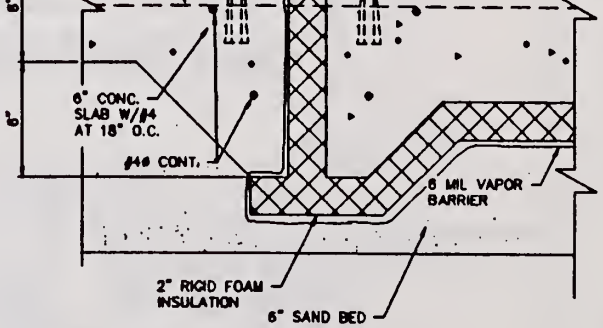
5/3 TRANSOM DETAIL
SCALE 3" = 1'-0"



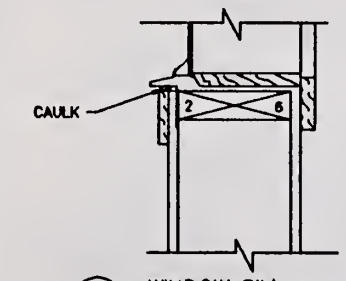
8/3 SCREENED VENT - SILL
SCALE 3" = 1'-0"



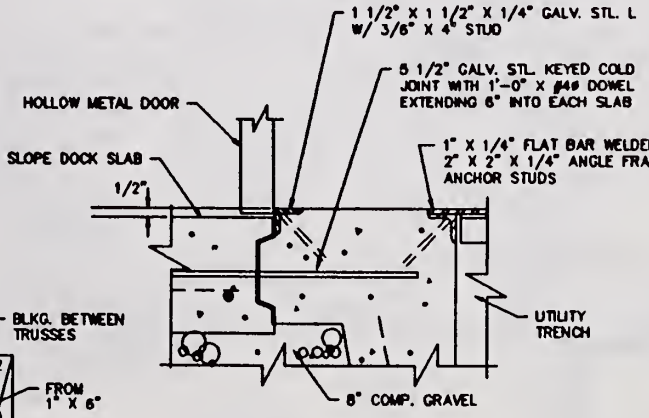
12/3 OVERHEAD DOOR DETAIL
JAMB - SCALE 3" = 1'-0"



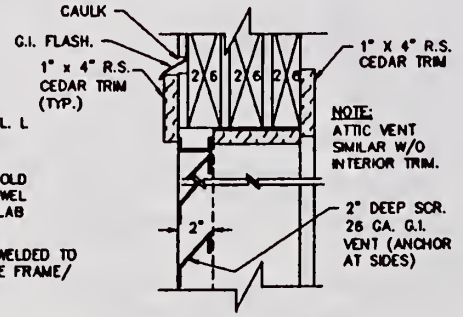
16/3 COOLER DOOR
SILL-SCALE: 3"=1'-0"



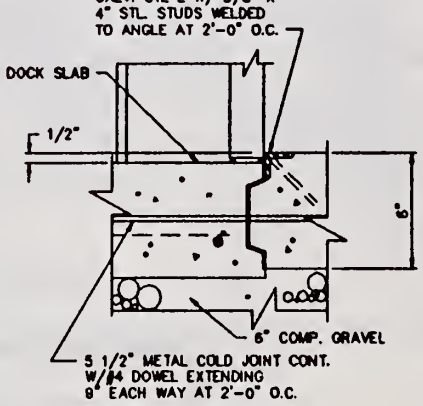
3/3 WINDOW SILL
SCALE 3" = 1'-0"



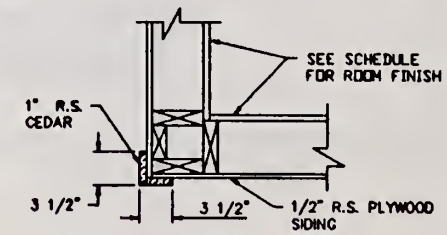
6/3 DOOR #4 SILL
SCALE 3" = 1'-0"



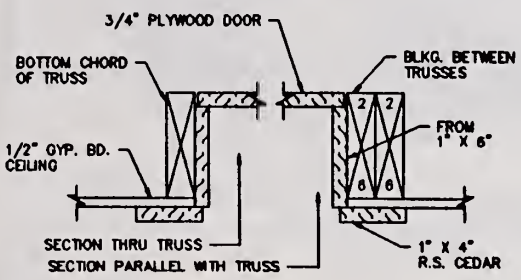
9/3 STOR.RM. VENT-HEAD
SCALE: 3"=1'-0"



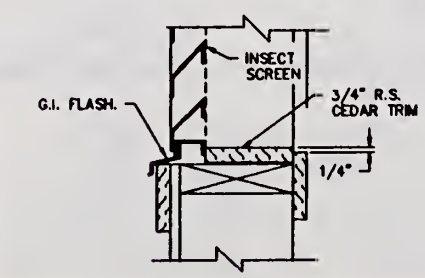
13/3 OVERHEAD DOOR DETAIL
SILL - SCALE 3" = 1'-0"



14/3 EXT. CORNER DETAIL
SCALE 1 1/2" = 1'-0"



17/3 ATTIC ACCESS DETAIL
SCALE 3" = 1'-0"



10/3 STOR. RM. VENT - SILL
SCALE
ATTIC VENT SI IT. TRIM

DWG. NO.
AS060103
1 DEC 87

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FOREST SERVICE
THE PACIFIC NORTHWEST REGION

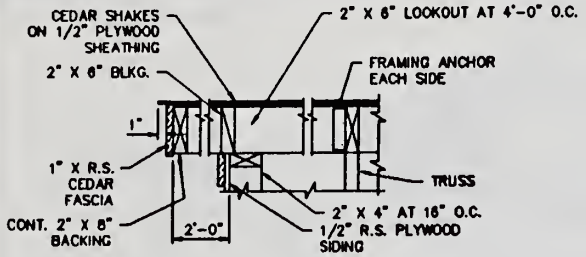
QUILCENE COOLER - STORAGE

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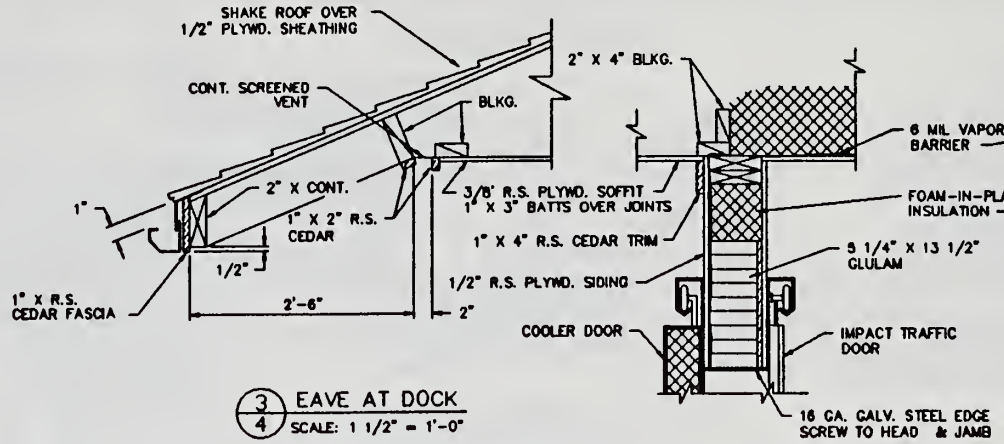
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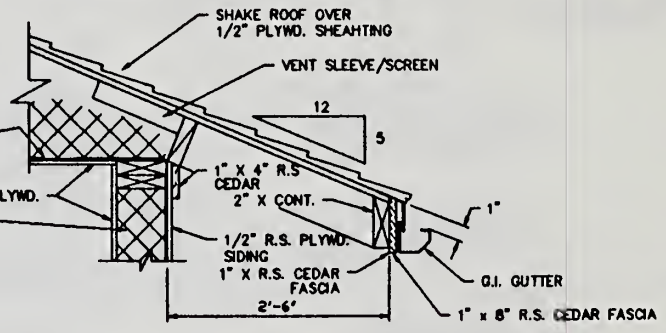
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4/4 TYPICAL RAKE
SCALE 1 1/2" = 1'-0"

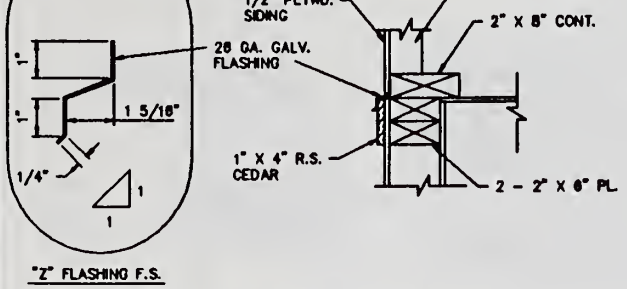


3/4 EAVE AT DOCK
SCALE: 1 1/2" = 1'-0"



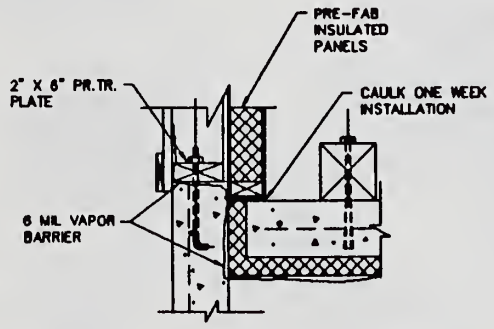
2/4 COOLER DOOR HEAD
SCALE 1 1/2" = 1'-0"

1/4 EAVE DETAIL AT COOLER
SCALE 1 1/2" = 1'-0"

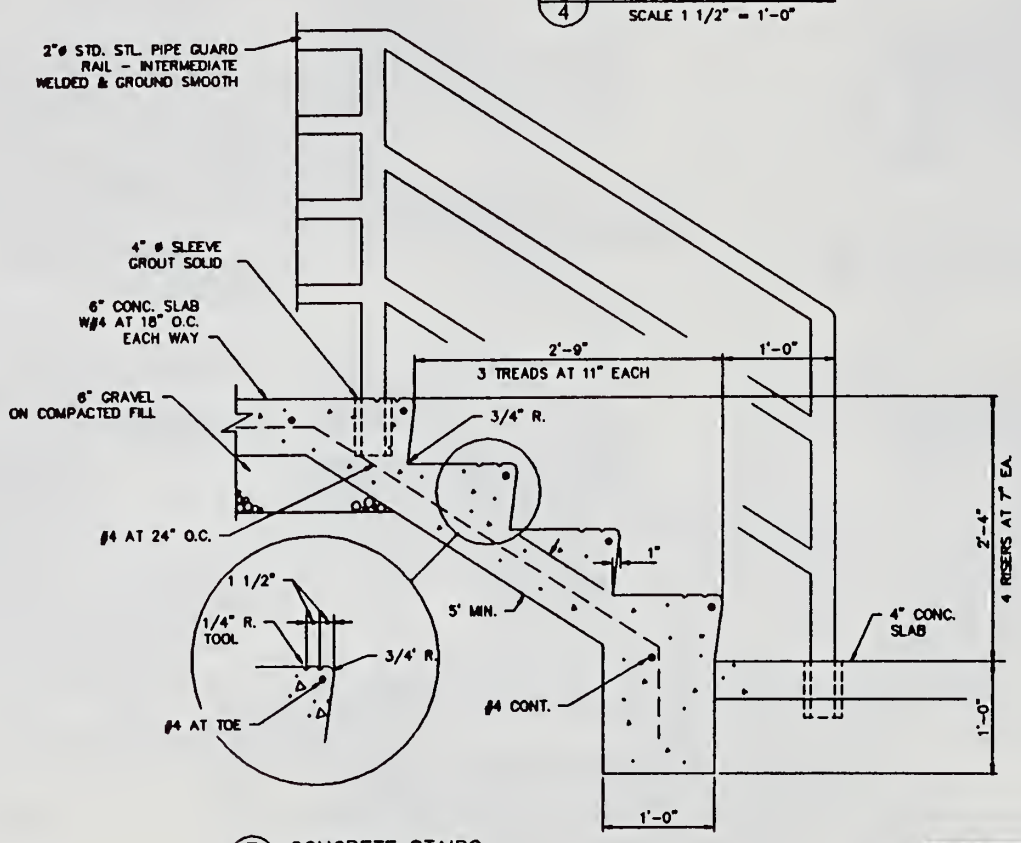


"Z" FLASHING F.S.

5/4 SIDING JOINT DETAIL
SCALE 1 1/2" = 1'-0"



6/4 PRE-FAB PANEL ALT.
SCALE 1 1/2" = 1'-0"

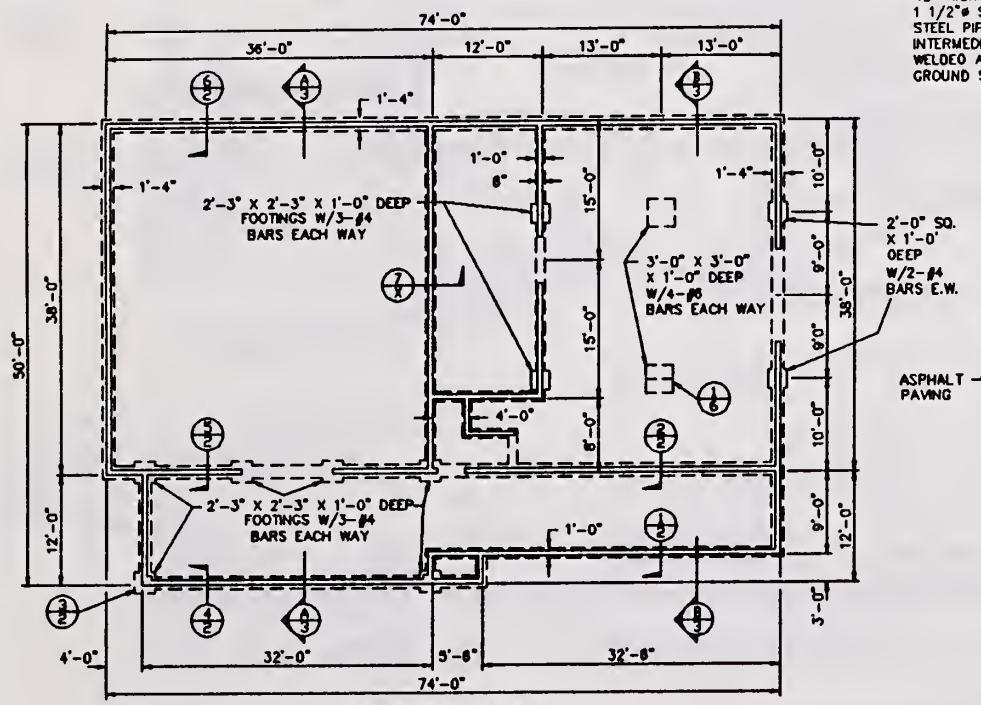


7/4 CONCRETE STAIRS
SCALE 1 1/2" = 1'-0"

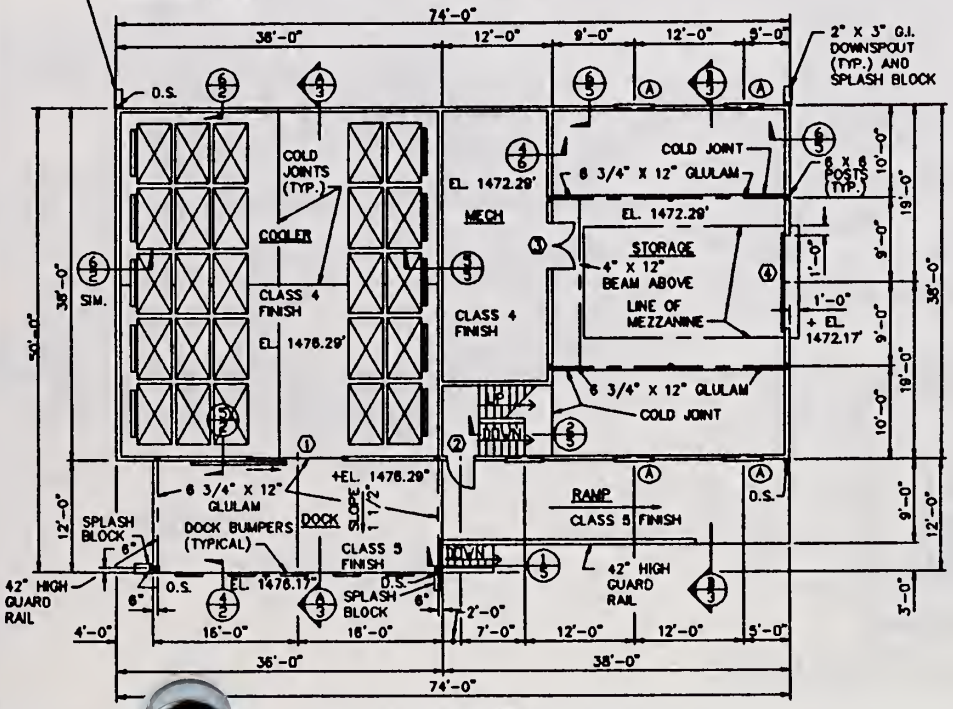
DWG. NO.
AS060104
1 DEC 87

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE THE PACIFIC NORTHWEST REGION	QUILCENE COOLER – STORAGE
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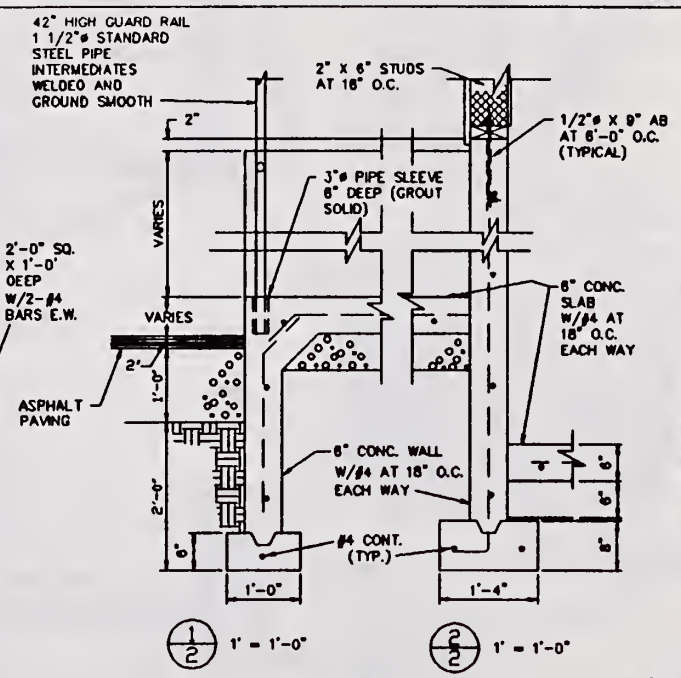
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FOUNDATION PLAN
SCALE 1/8" = 1'-0"

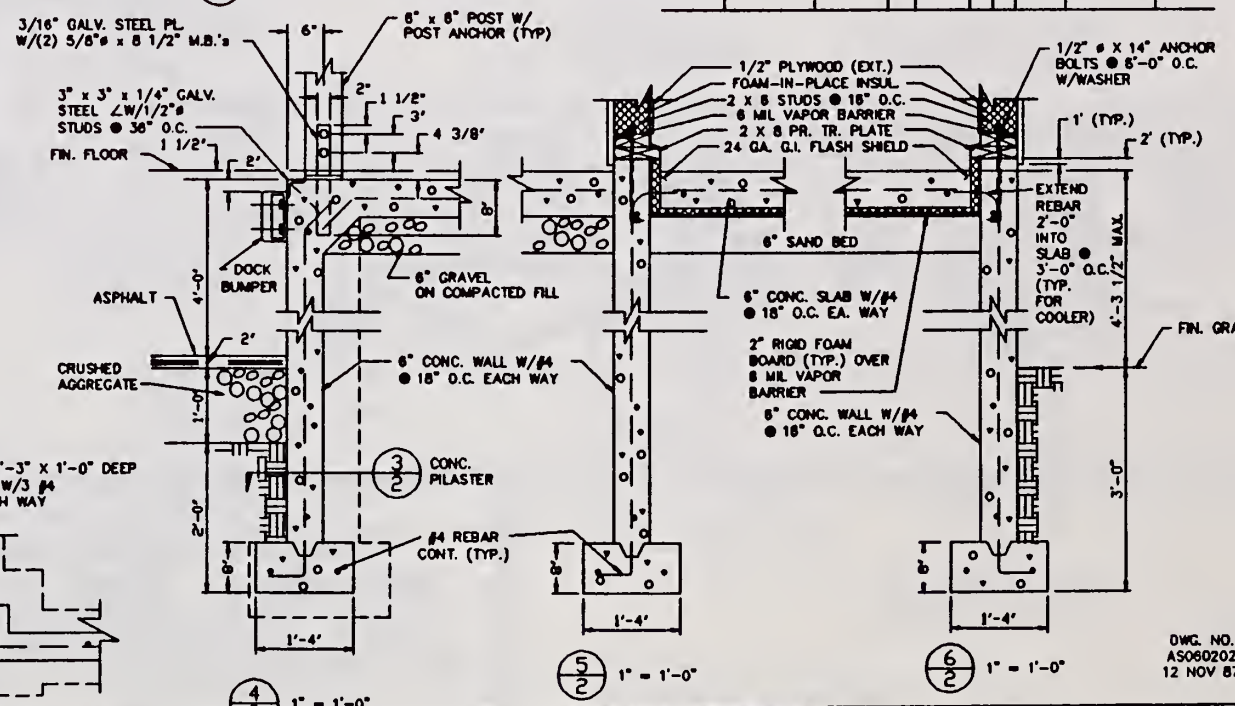


FLOOR PLAN SCALE 1/8" = 1'-0"



1/2 1" = 1'-0"

2/2 1" = 1'-0"



3/2 3/4" = 1'-0"

4/2 1" = 1'-0"

5/2 1" = 1'-0"

6/2 1" = 1'-0"

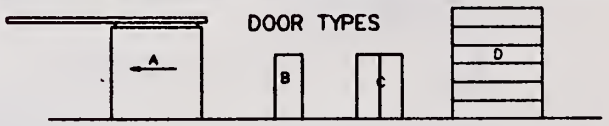
ROOM FINISH SCHEDULE

ROOM	FLOOR	BASE	WALLS	CEILING	HEIGHT	REMARKS
	6" CONC. SLAB	3/4" PLYWOOD	CONCRETE BUILT-UP METAL	1/2" PLYWOOD - COATED	1/2" PLYWOOD - PAINTED	5/8" W.R. GYPSUM BOARD	1/2" PLYWOOD - COATED	5/8" W.R. GYPSUM BOARD EXPOSED STRUCTURE		
COOLER	●			●	●		●			14'-0"
MECHANICAL	●		●		●			●		18'-0"
STORAGE	●		●		●			●		8'-0"
MEZZANINE		●				●		●		9'-0"
STAIRWELL	●				●			●		

WINDOW & DOOR SCHEDULE

NO.	SIZE	MAT'L	TYPE	HDW	FINISH	FRAME	FINISH	DETAILS	REMARKS
1	10'-0" X 10'-0"	METAL	A		ENAMEL	METAL	ENAMEL		COOLER DOOR
2	3'-0" X 7'-0" X 1 3/4"	H.M.	B		ENAMEL	METAL	ENAMEL		
3	2 - 2'-6" X 7'-0" X 1 3/4"	H.M.	C		ENAMEL	METAL	ENAMEL		
4	10'-0" X 10'-0"	METAL	D		ENAMEL	METAL	ENAMEL		OVERHEAD DOOR
5	10'-0" X 12'-0" X 1 3/4"	VINYL							IMPACT TRAFFIC DOOR
A	4'-0" X 4'-0"	ALUM.	DOUBLE HUNG W/INSUL. GLASS						WINDOW

DOOR TYPES



DWG. NO. AS060202
12 NOV 87

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FOREST SERVICE
THE PACIFIC NORTHWEST REGION

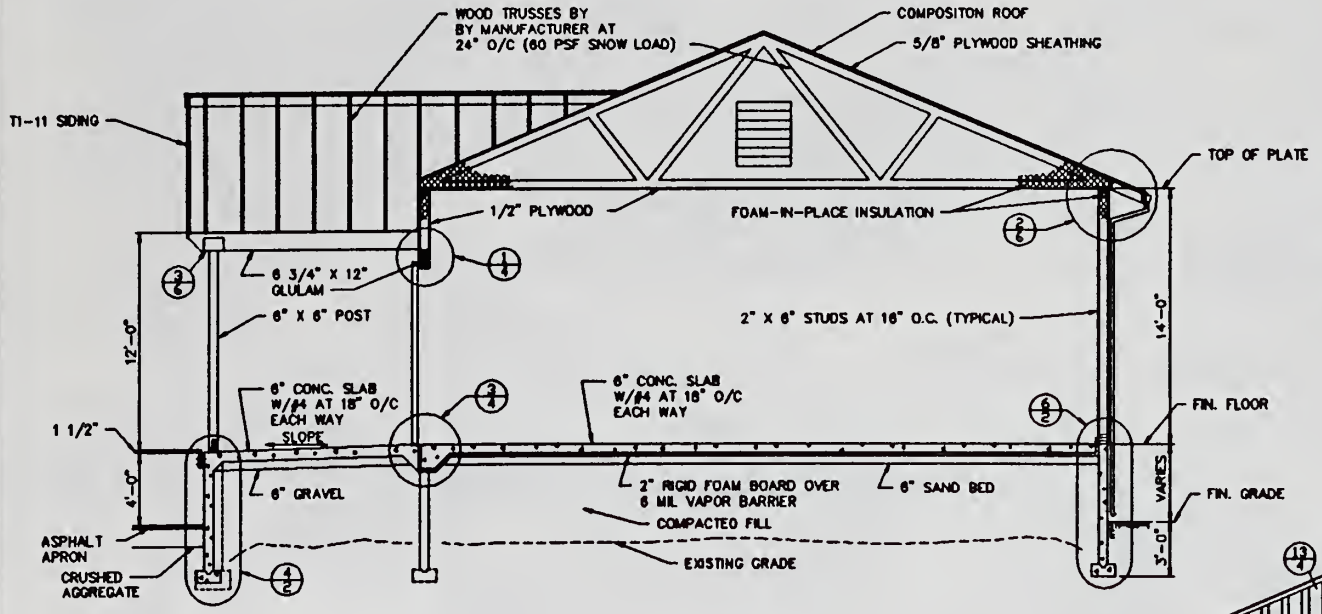
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McKENZIE TREE COOLER

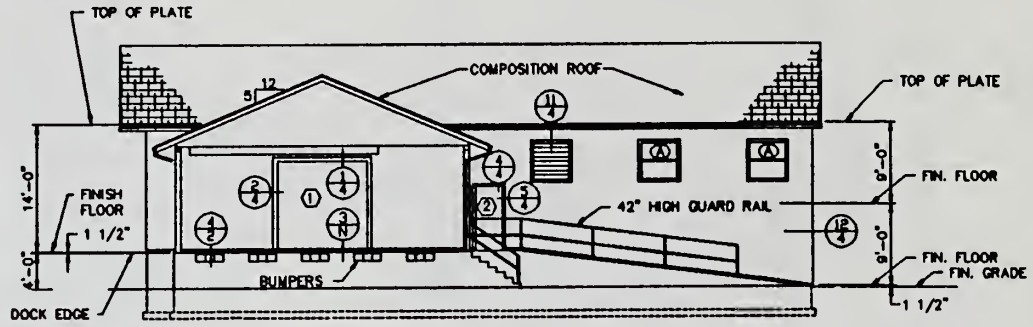
FOUNDATION/FLOOR P
SCHEDULES, DETAILS

SHT. 2
OF

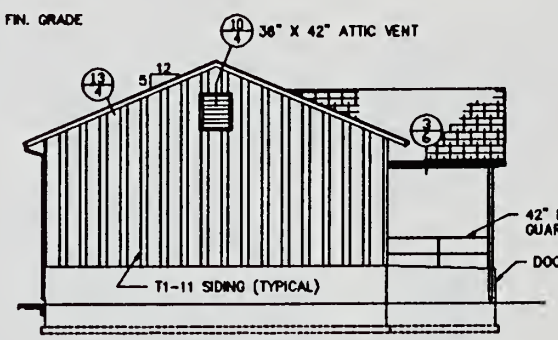
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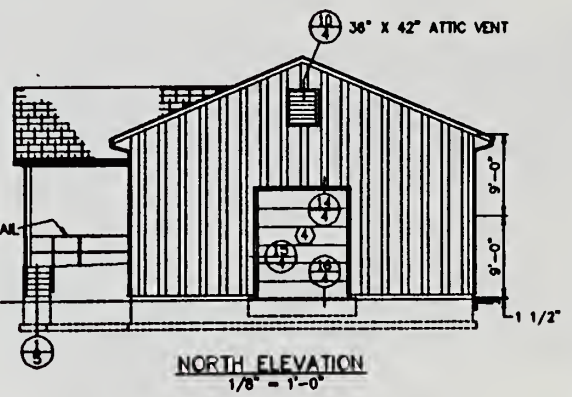
A/3 SECTION
1/4" = 1'-0"



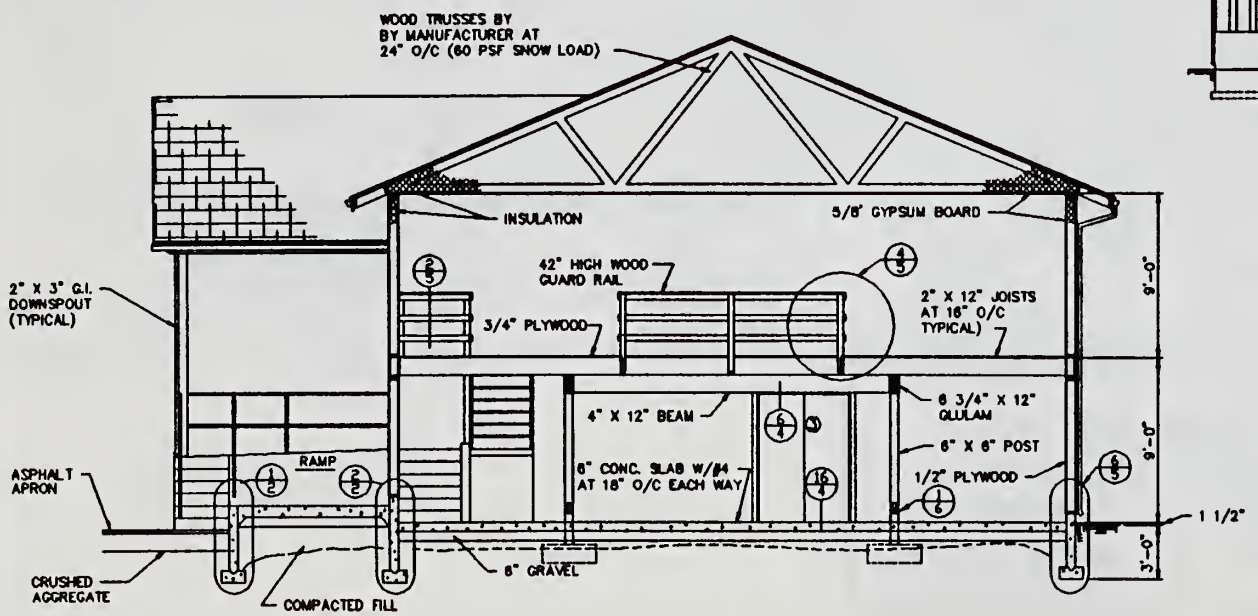
EAST ELEVATION
1/8" = 1'-0"



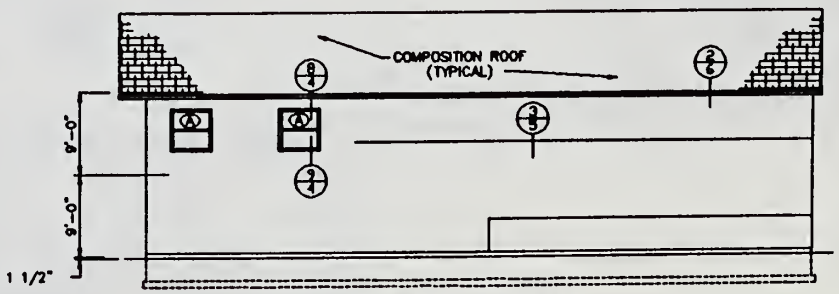
SOUTH ELEVATION
1/8" = 1'-0"



NORTH ELEVATION
1/8" = 1'-0"



B/3 SECTION
1/4" = 1'-0"



WEST ELEVATION
1/8" = 1'-0"

DWG. NO.
AS060203
13 NOV 87

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

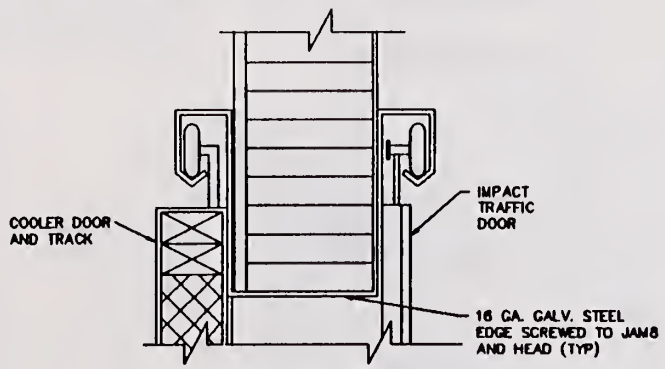
McKENZIE TREE COOLER

DRAWN DATE
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

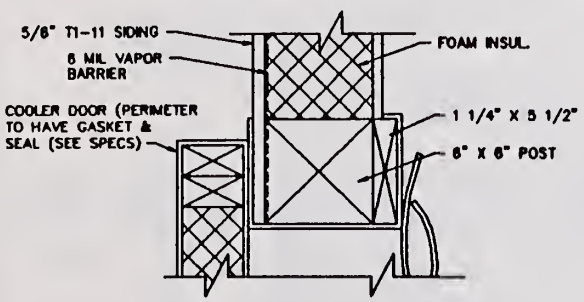
ELEVATIONS & SECTIONS

SHT. 3
OF

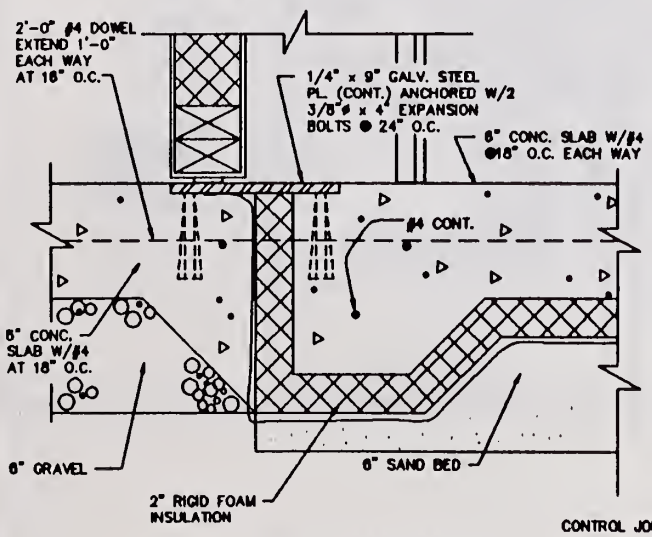
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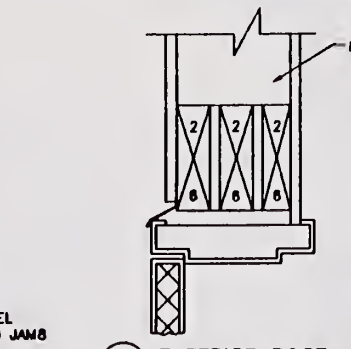
1/4 COOLER DOOR
HEAD-SCALE: 3"=1'-0"



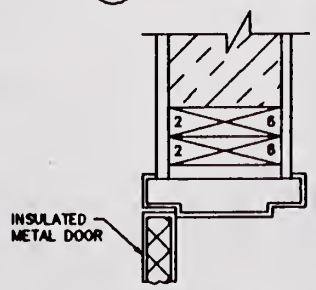
2/4 COOLER DOOR
JAMB-SCALE: 3"=1'-0"



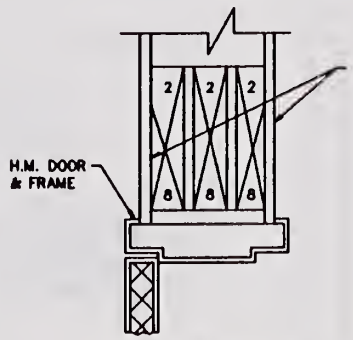
3/4 COOLER DOOR
SILL-SCALE: 3"=1'-0"



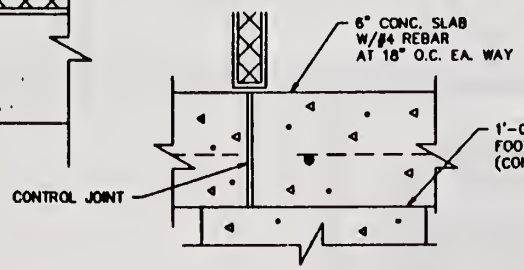
4/4 EXTERIOR DOOR
HEAD-SCALE: 3"=1'-0"



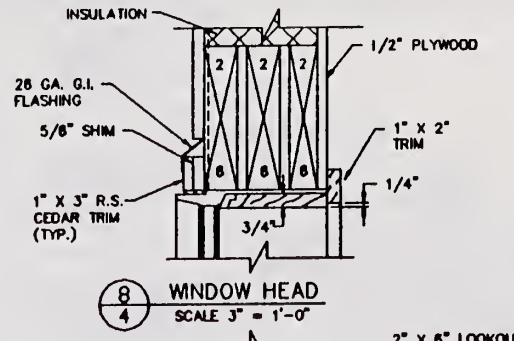
5/4 EXTERIOR DOOR
JAMB-SCALE: 3"=1'-0"



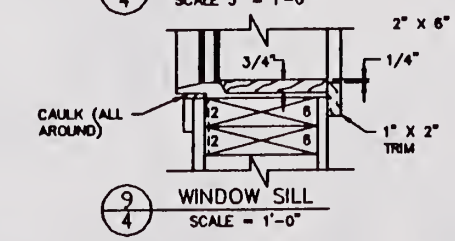
6/4 INTERIOR DOOR
HEAD-SCALE: 3"=1'-0"



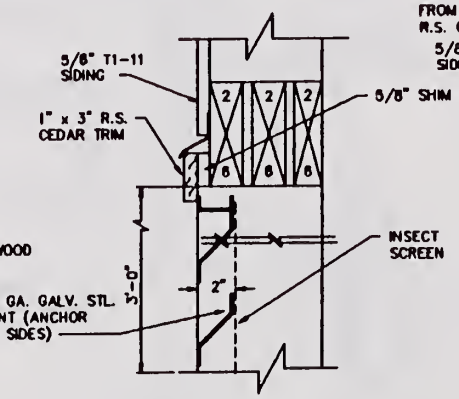
7/4 INTERIOR DOOR
SILL - SCALE 3" = 1'-0"



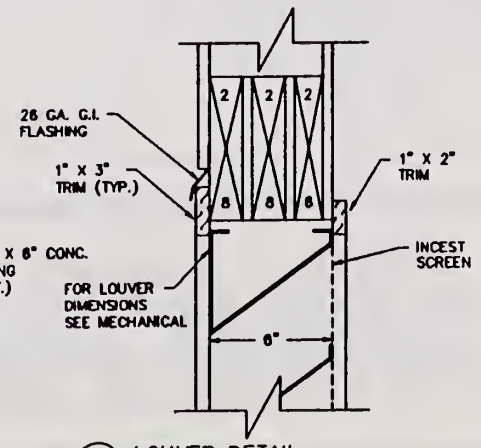
8/4 WINDOW HEAD
SCALE 3" = 1'-0"



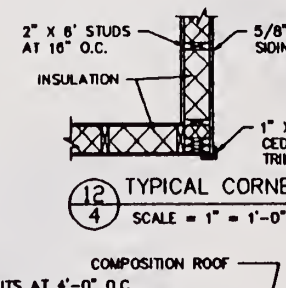
9/4 WINDOW SILL
SCALE = 1'-0"



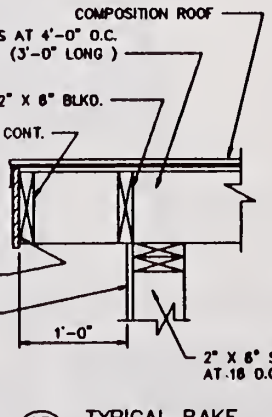
10/4 ATTIC VENT
SCALE: 3"=1'-0"



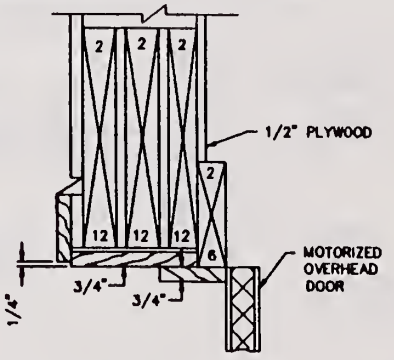
11/4 LOUVER DETAIL
SCALE: 3"=1'-0"



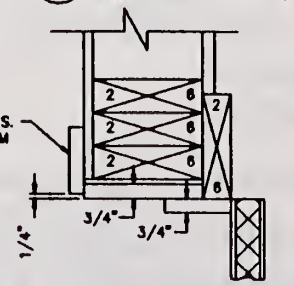
12/4 TYPICAL CORNER
SCALE = 1" = 1'-0"



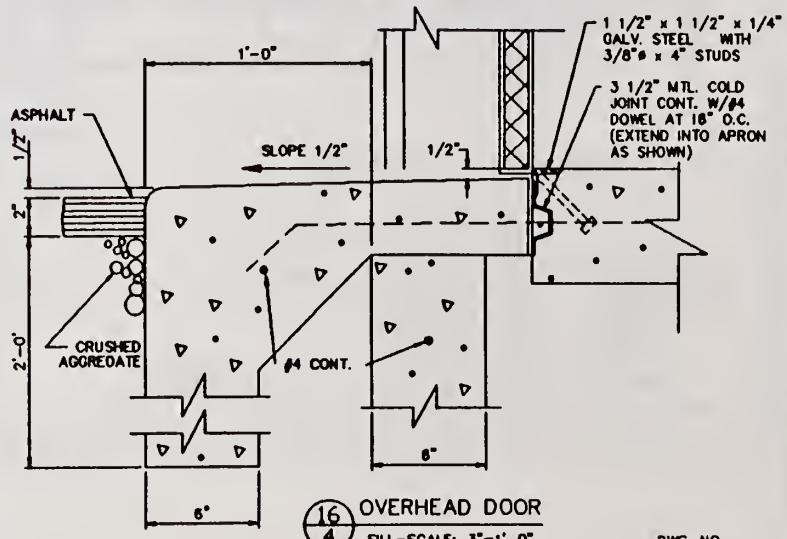
13/4 TYPICAL RAKE
SCALE 1 1/2" = 1'-0"



14/4 OVERHEAD DOOR
JAMB - SCALE 3" = 1'-0"



15/4 OVERHEAD DOOR
JAMB - SCALE 3" = 1'-0"



16/4 OVERHEAD DOOR
SILL-SCALE: 3"=1'-0"

DWG. NO.
AS060204
17 NOV 18

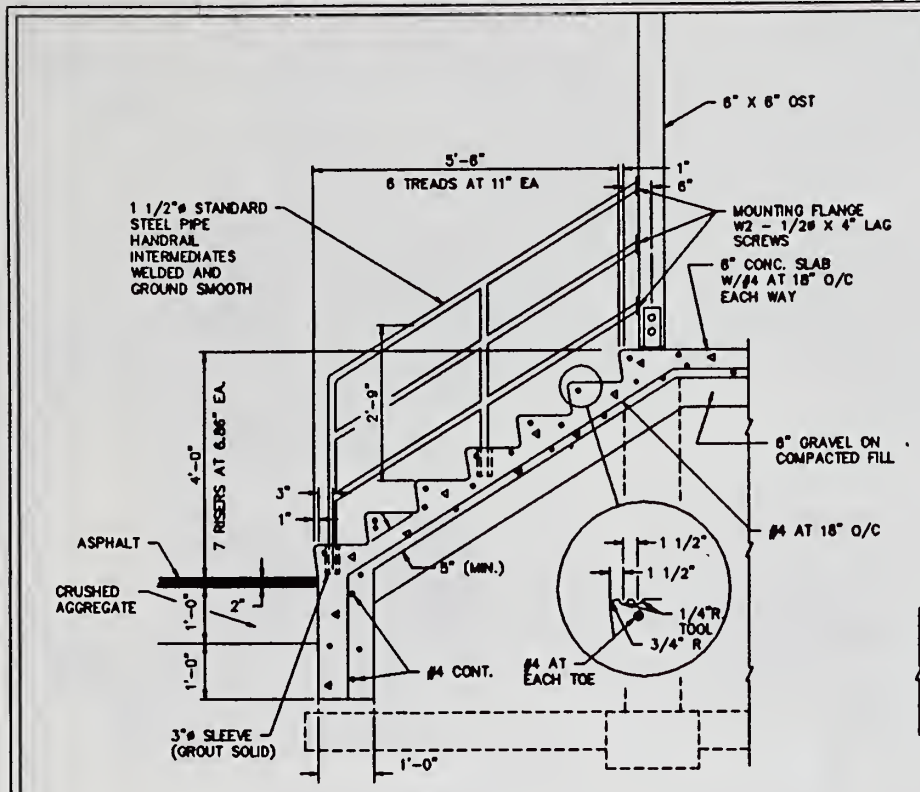
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

McKENZIE TREE COOLER

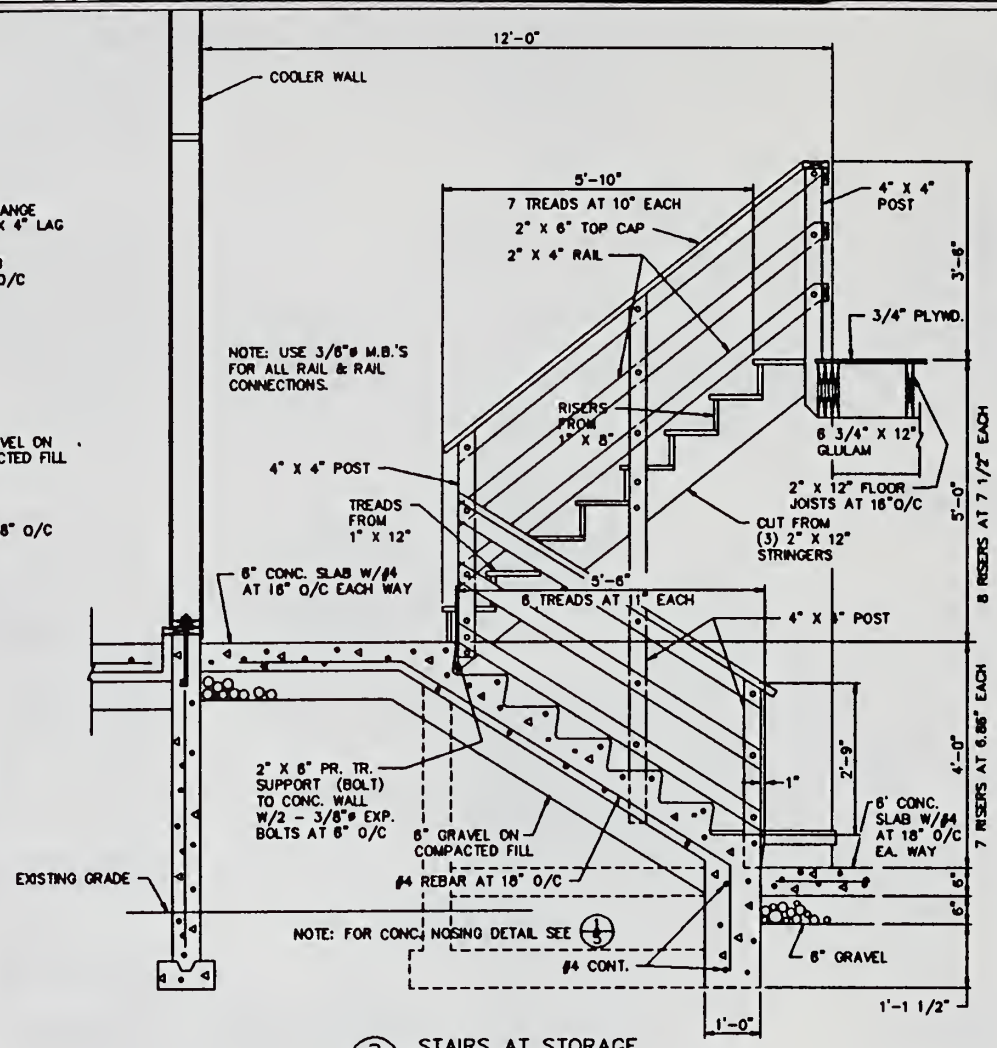
DRAWN ____ DATE ____
DESIGNED ____ DATE ____
CHECKED ____ DATE ____
REVIEWED ____ DATE ____

SHT. 4
OF

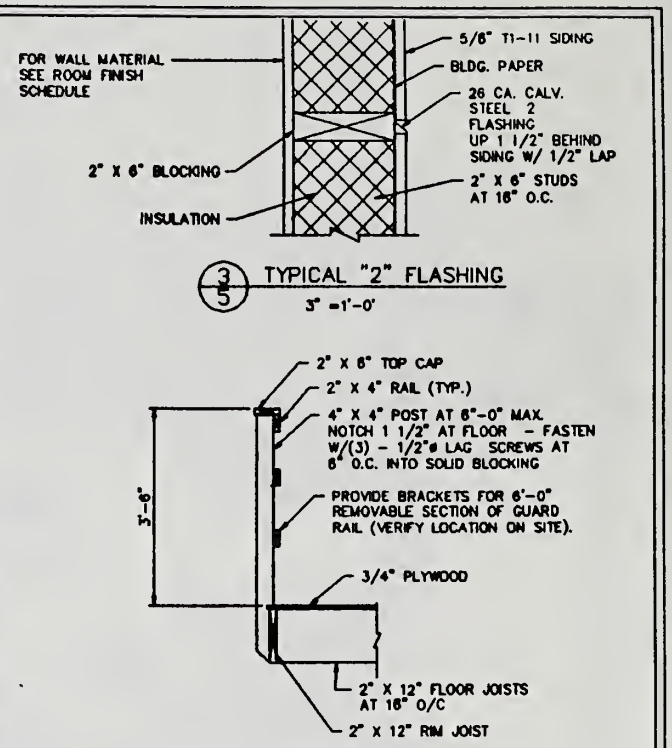
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1/5 STAIR AT DOCK
3/4" = 1'-0"

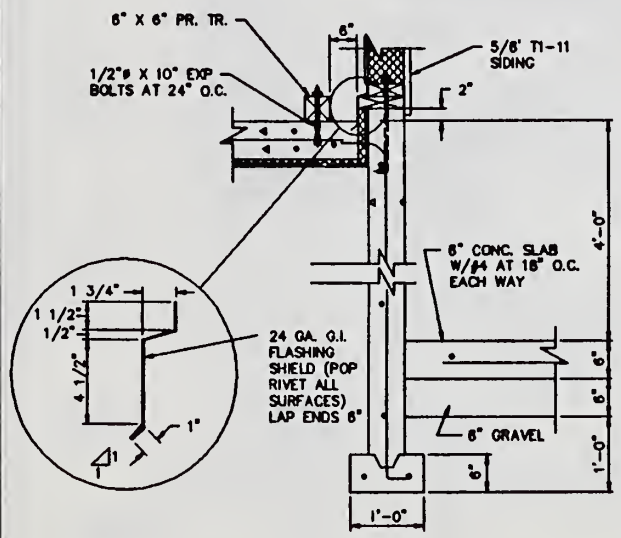


2/5 STAIRS AT STORAGE
3/4" = 1'-0"

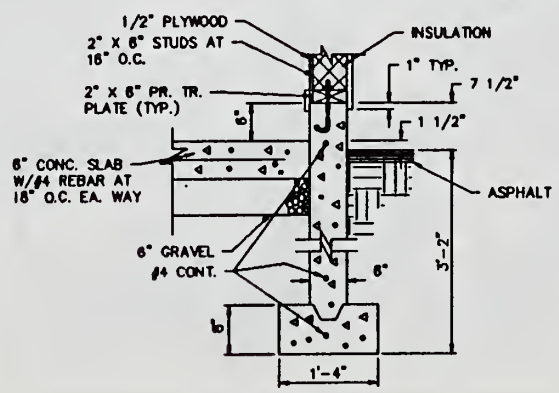


3/5 TYPICAL "2" FLASHING
3" =1'-0"

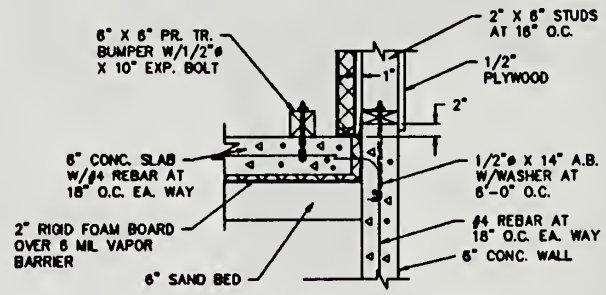
4/5 GURADRAIL DETAIL
3/4" = 1'-0"



5/5 1" = 1'-0"



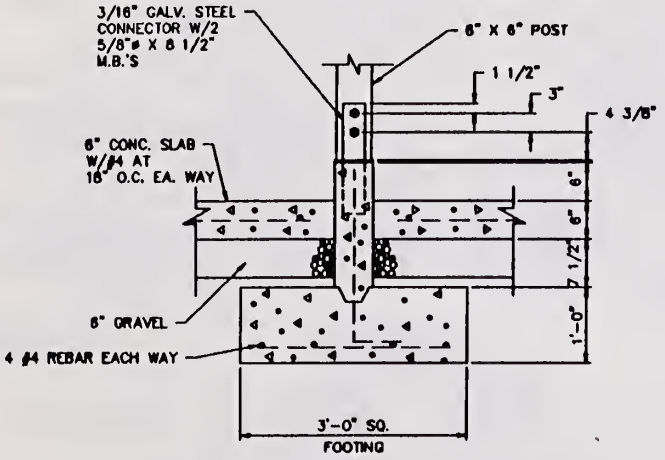
6/5 FOUNDATION
1" = 1'-0"



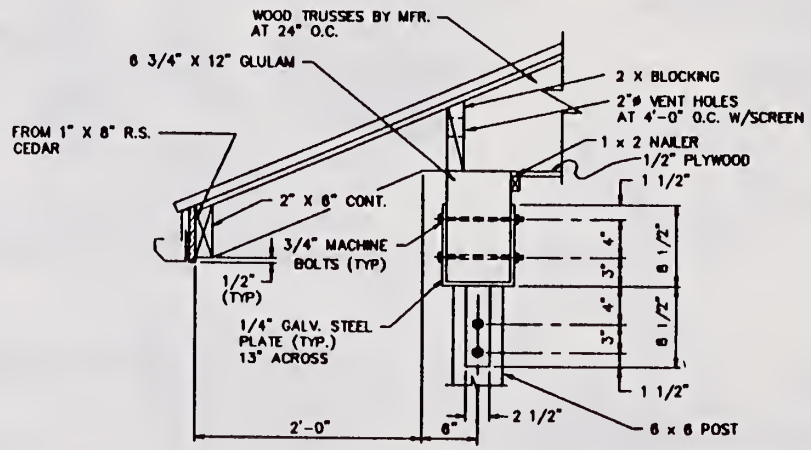
7/5 PRE-FAB PANEL ALTERNATE
1" = 1'-0"

DWG. NO.
AS060205
17 NOV 87

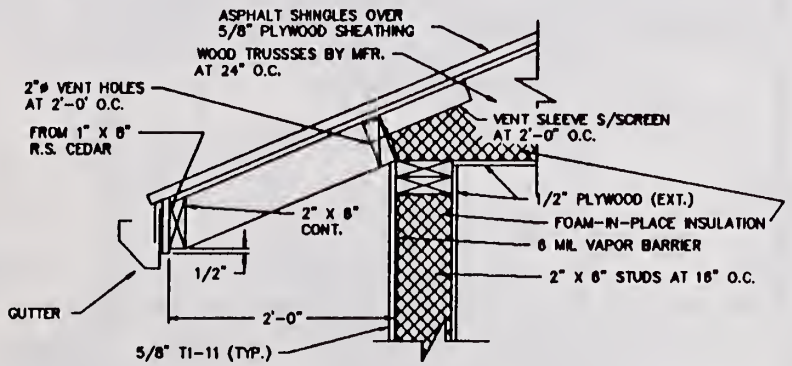
U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE THE PACIFIC NORTHWEST REGION	McKENZIE TREE COOLER
DRAWN DATE DESIGNED DATE CHECKED DATE REVISED DATE	MISCELLANEOUS DETAILS SHT. 5 OF



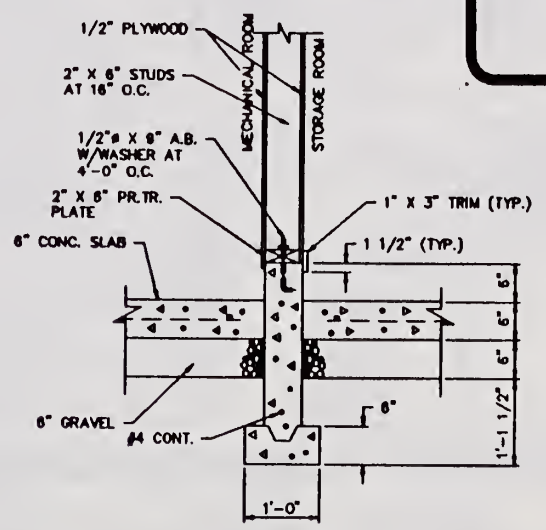
1/6 COLUMN FOOTING
SCALE 1" = 1'-0"



3/6 DOCK EAVE
SCALE: 1 1/2" = 1'-0"



2/6 COOLER EAVE
SCALE: 1 1/2" = 1'-0"



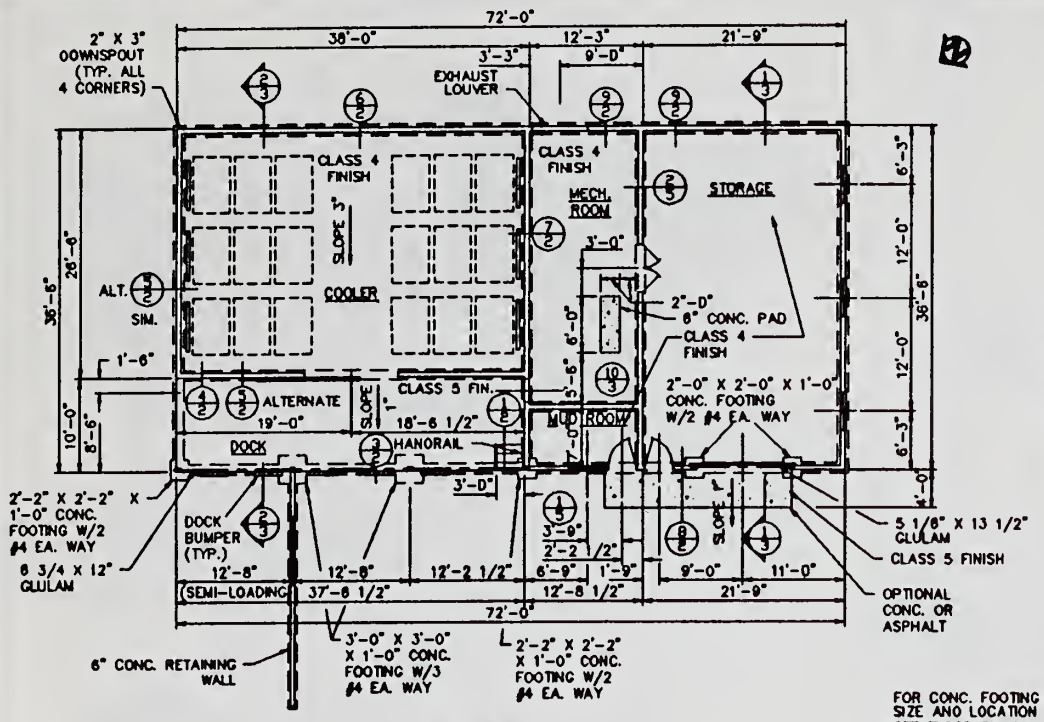
4/6 FOUNDATION
SCALE 1" = 1'-0"

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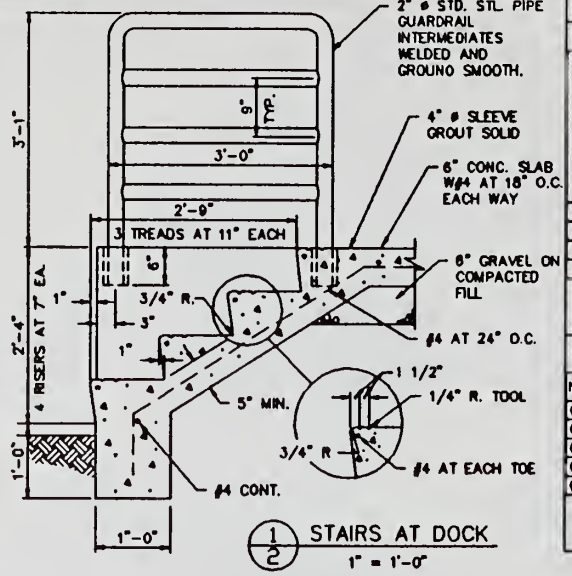
DWG. NO.
AS060206
18 NOV 87

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE THE PACIFIC NORTHWEST REGION	McKENZIE TREE COOLER
DRAWN ____ DATE ____ DESIGNED ____ DATE ____ CHECKED ____ DATE ____ REVIEWED ____ DATE ____	MISCELLANEOUS DETAILS SHT. 6 OF

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FLOOR PLAN
1/8" = 1'-0"



1/2 STAIRS AT DOCK
1" = 1'-0"

ROOM FINISH SCHEDULE

ROOM	FLOOR	BASE	WALLS	CEILING	HEIGHT	REMARKS
	4" CON. SLAB / 6" CONC. SLAB	BUILT-UP METAL / 4" CONCRETE	1/2" PLYWOOD EXPOSED STUDS	1/2" PLYWOOD EXPOSED STRUCTURE		
COOLER	●	●	●	●	12'-0"	FOAM-IN-PLACE INSUL. COATED PLYWD.
MECHANICAL RM.	●		●	●	14'-6"	CLEAR ACRYLIC FLOOR SEALER
MUD ROOM	●		●	●	8'-0"	R-19 INSUL. WALLS/R-30 INSUL. CEILING
STORAGE	●		●	●	14'-6"	4'-0" X 2'-0" SINGLE PANE WINDOWS *

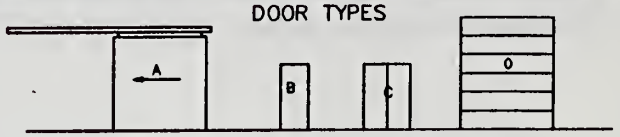
* WINDOWS IN STORAGE & MUD ROOMS TO BE ALUM. SLIDING.
NOTE: 2" X 6" CEILING JOISTS IN MUD ROOM FOR 8'-0" CEILING.

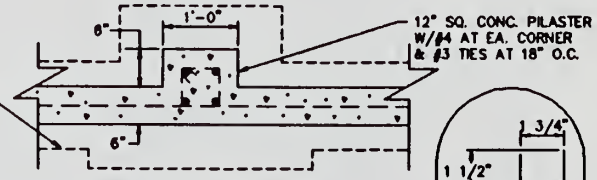
DOOR SCHEDULE

NO.	SIZE	MAT'L TYPE	HDW	FINISH	FRAME	DETAILS	REMARKS
(1)	10'-0" X 10'-0" X 4"	'A' FLUSH MTL	-	ENAMEL	METAL	(18/4)(17/4)(18/4)	COOLER DOOR
(2)	3'-0" X 7'-0"X 1 3/4"	'B FLUSH MTL	NO.1	ENAMEL	METAL	(9/4)(10/4)(11/4)	SEE NOTE
(3)	3'-0" X 7'-0"X 1 3/4"	'B' FLUSH MTL	NO.2	ENAMEL	METAL	(5/4)(6/4)(7/4)	
(4)	2 - 2'-6" X 7'-0" X 1 3/4"	'C' FLUSH MTL	NO.3	ENAMEL	METAL	(11/4)(12/4)	
(5)	10'-0" X 10'-0" X 1 3/4"	'D' PNL-WOOD	-	ENAMEL	WOOD	(13/4)(14/4)(15/4)	OVERHEAD DOOR

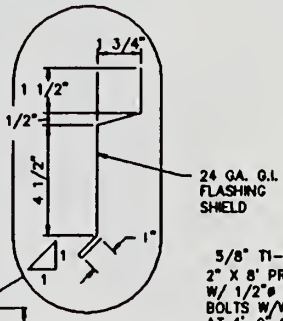
NOTES:
1. DOOR (1) TO HAVE IMPACT TRAFFIC DOOR.
2. DOOR (2) TO BE WEATHERSTRIPPED AND HAVE DOOR SEAL AT THRESHOLD.

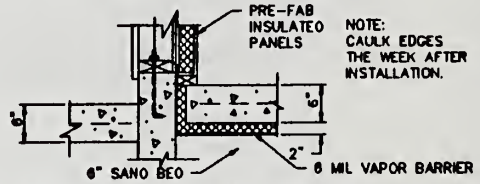
DOOR TYPES



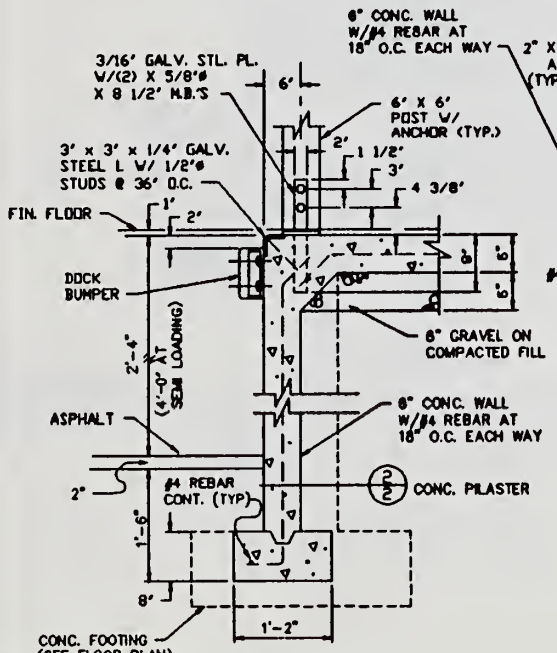


2/2 PILASTER AT DOCK
1" = 1'-0"

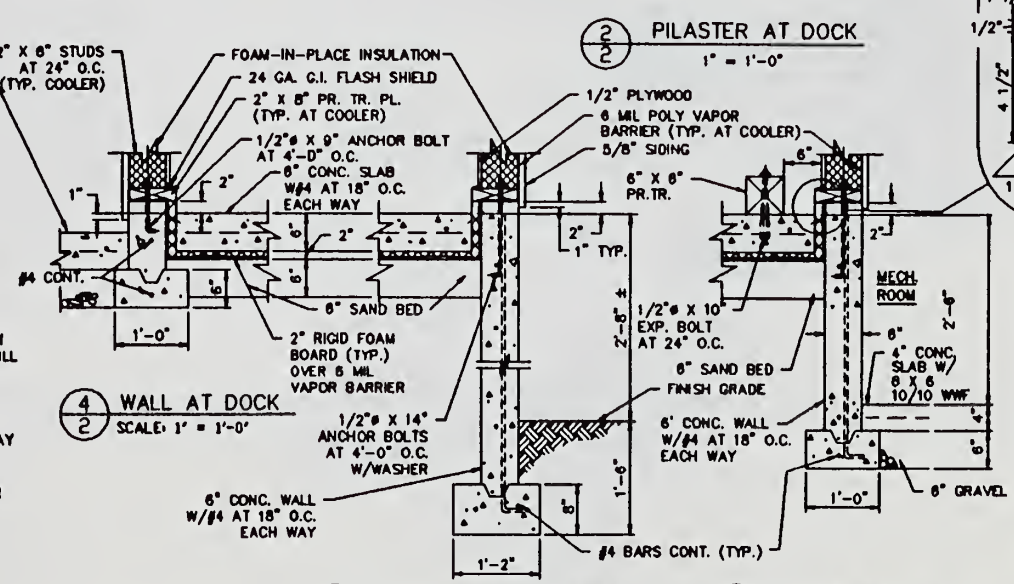




5/2 PRE-FAB PANEL ALTERNATE
1" = 1'-0"



3/2 DOCK EDGE
SCALE: 1" = 1'-0"



4/2 WALL AT DOCK
SCALE: 1" = 1'-0"

6/2 TYPICAL COOLER WALL
SCALE: 1" = 1'-0"

7/2 COOLER WALL AT MECH. ROOM
1" = 1'-0"

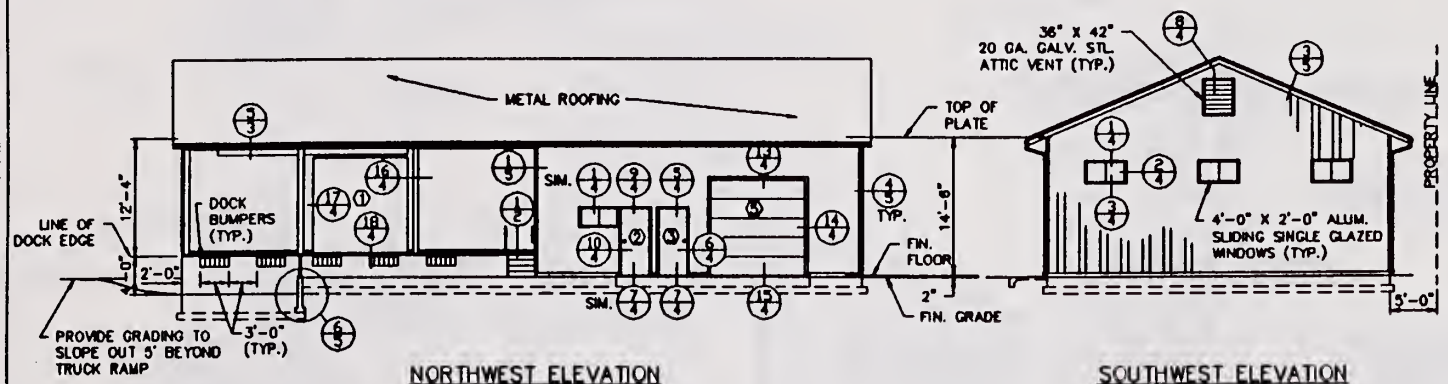
8/2 WALL AT STORAGE AND MUD ROOM
1" = 1'-0"

9/2 1" = 1'-0"

OWG. NO. AS060402
23 NOV. 87

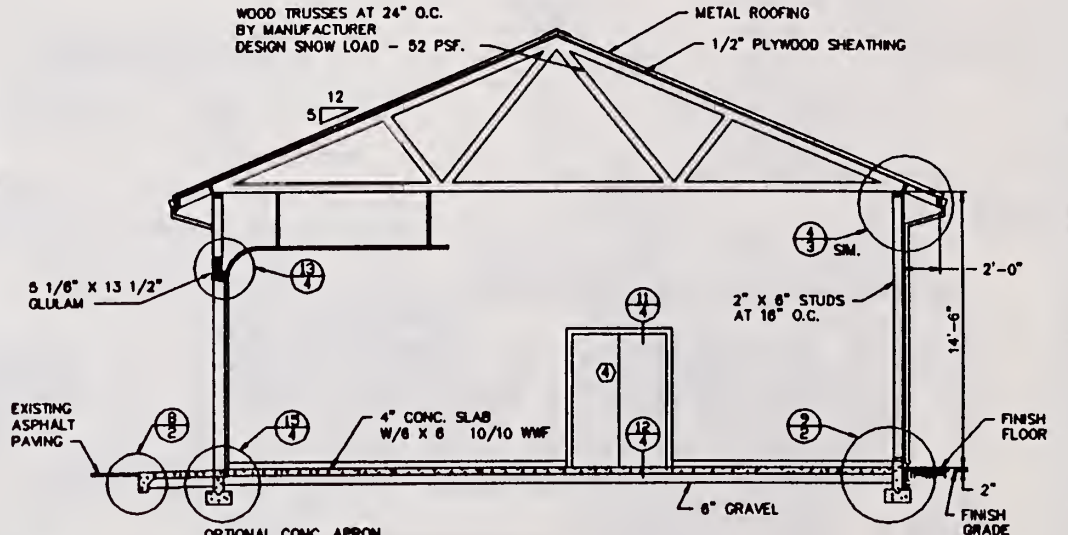
U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE MT. BAKER - SNOQUALMIE NATIONAL FOREST THE PACIFIC NORTHWEST REGION	NORTH BEND TREE COOLER
DRAWN ____ DATE ____ DESIGNED ____ DATE ____ CHECKED ____ DATE ____ REVISED ____ DATE ____	FLOOR PLAN, SCHEDULES, DETAILS SHT. 2 OF

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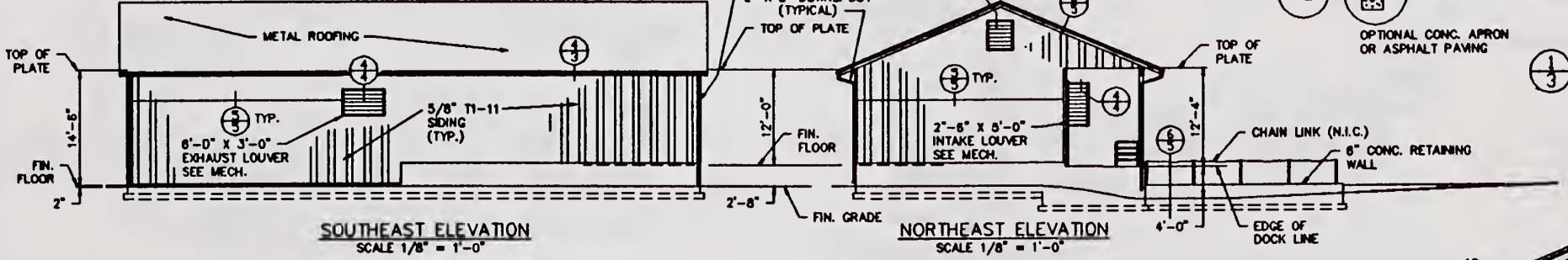


NORTHWEST ELEVATION
SCALE 1/8" = 1'-0"

SOUTHWEST ELEVATION
SCALE 1/8" = 1'-0"

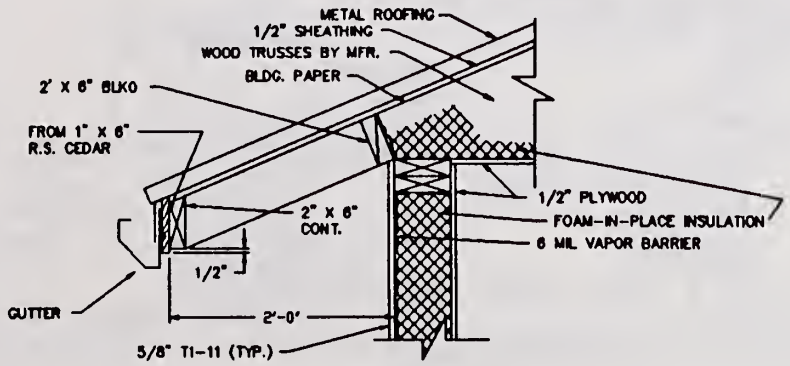


1/3 SECTION AT STORAGE
SCALE 1/4" = 1'-0"

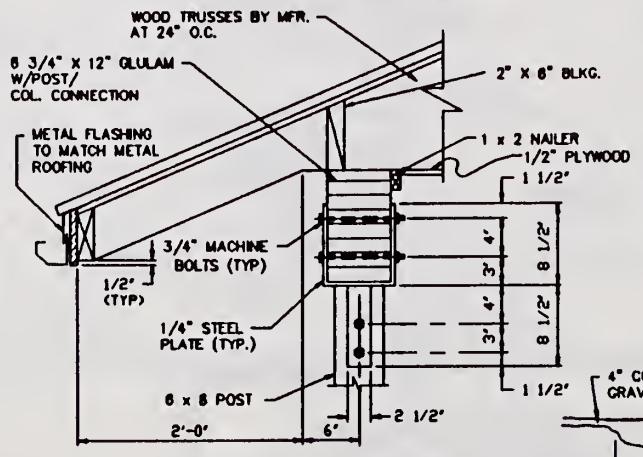


SOUTHEAST ELEVATION
SCALE 1/8" = 1'-0"

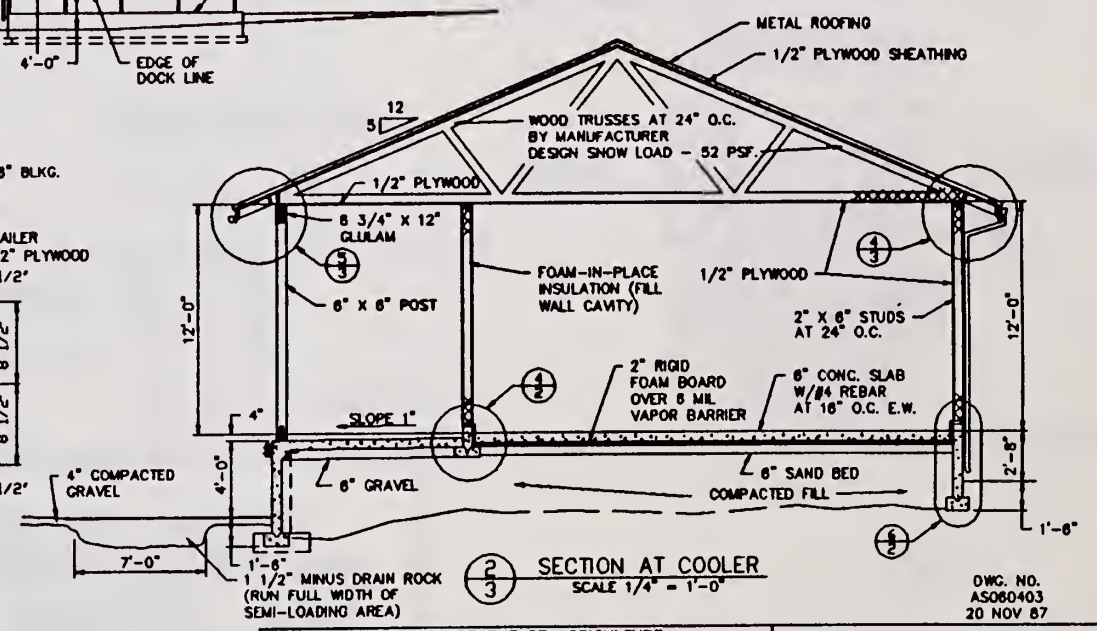
NORTHEAST ELEVATION
SCALE 1/8" = 1'-0"



4/3 COOLER EAVE
SCALE: 1 1/2" = 1'-0"



5/3 DOCK EAVE
SCALE: 1 1/2" = 1'-0"



2/3 SECTION AT COOLER
SCALE 1/4" = 1'-0"

DWG. NO.
AS060403
20 NOV 87

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
MT. BAKER - SNOQUALMIE NATIONAL FOREST
THE PACIFIC NORTHWEST REGION

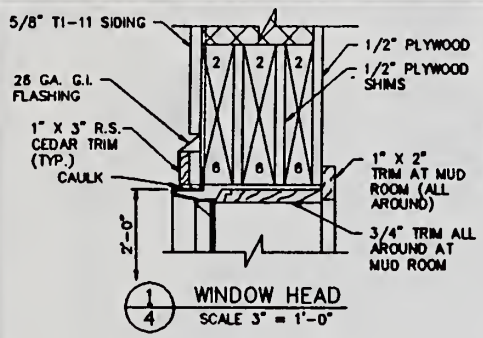
DRAWN ____ DATE ____
DESIGNED ____ DATE ____
CHECKED ____ DATE ____
REVIEWED ____ DATE ____

NORTH BEND TREE COOLER

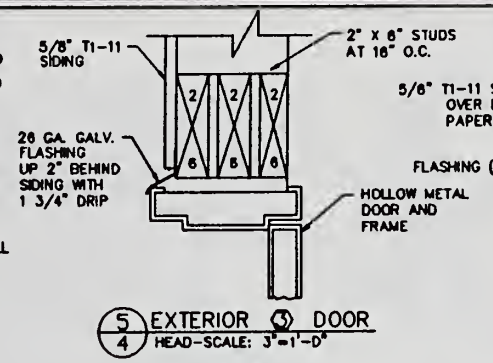
ELEVATIONS &

SHT. 3
OF

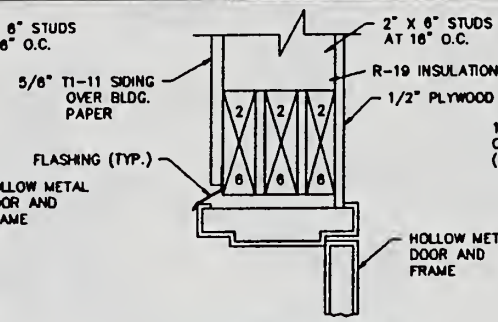
THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.



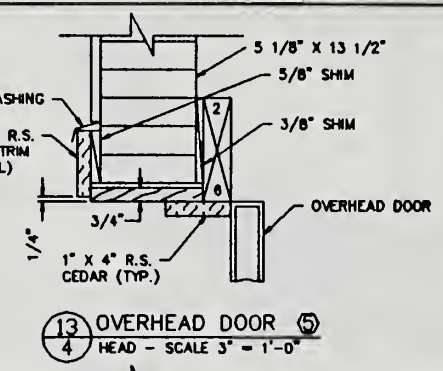
1/4 WINDOW HEAD
SCALE 3" = 1'-0"



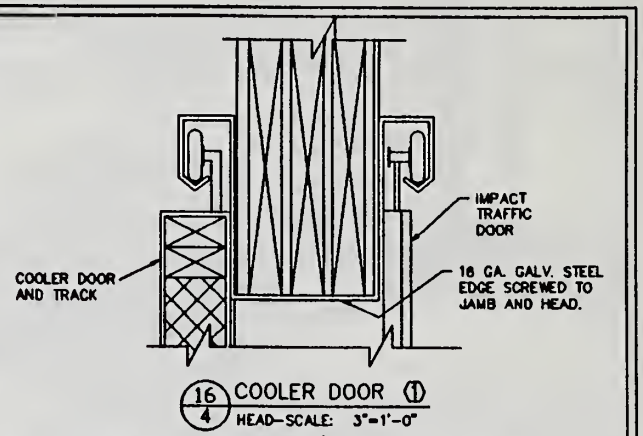
5/4 EXTERIOR (3) DOOR
HEAD-SCALE: 3"=1'-0"



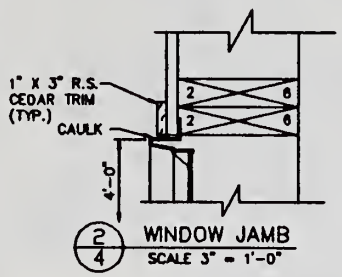
9/4 EXTERIOR (2) DOOR
HEAD-SCALE: 3"=1'-0"



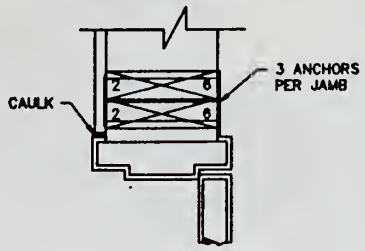
13/4 OVERHEAD DOOR (5)
HEAD - SCALE 3" = 1'-0"



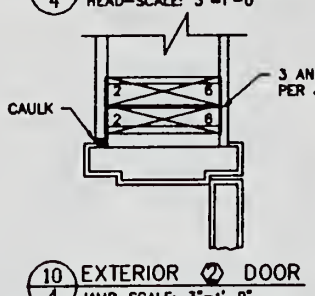
16/4 COOLER DOOR (1)
HEAD-SCALE: 3"=1'-0"



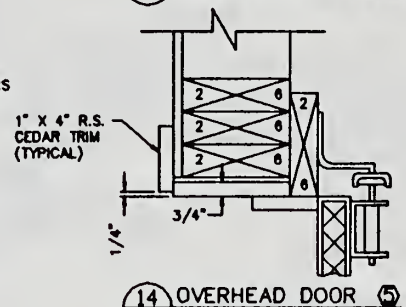
2/4 WINDOW JAMB
SCALE 3" = 1'-0"



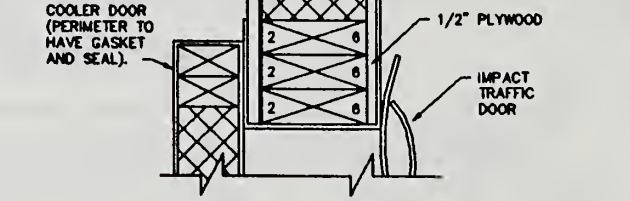
6/4 EXTERIOR (3) DOOR
JAMB-SCALE: 3"=1'-0"



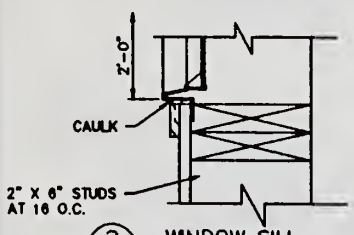
10/4 EXTERIOR (2) DOOR
JAMB-SCALE: 3"=1'-0"



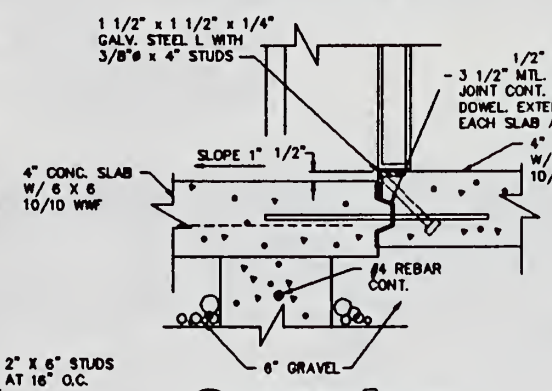
14/4 OVERHEAD DOOR (5)
JAMB - SCALE 3" = 1'-0"



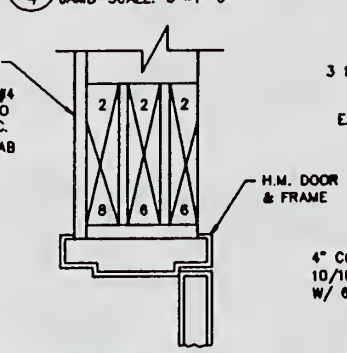
17/4 COOLER DOOR (1)
JAMB-SCALE: 3"=1'-0"



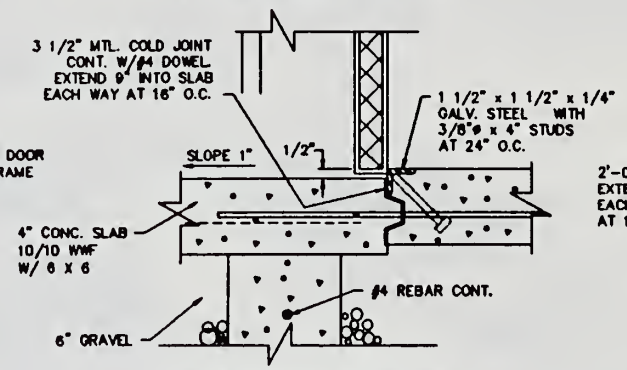
3/4 WINDOW SILL
SCALE 3" = 1'-0"



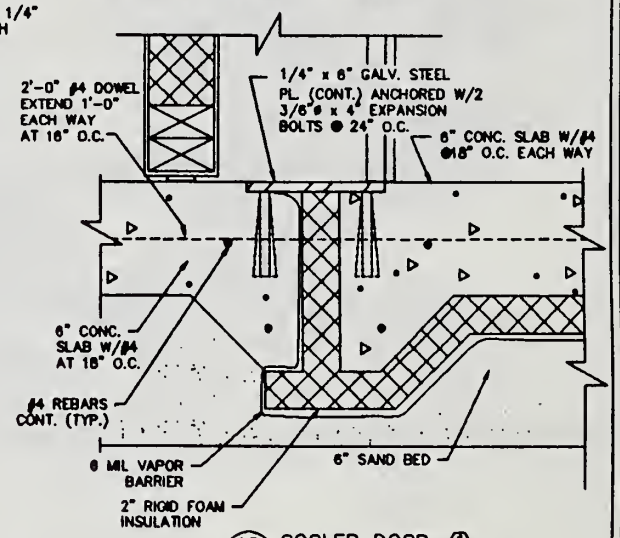
7/4 EXTERIOR (3) DOOR
SILL-SCALE 3"=1'-0"



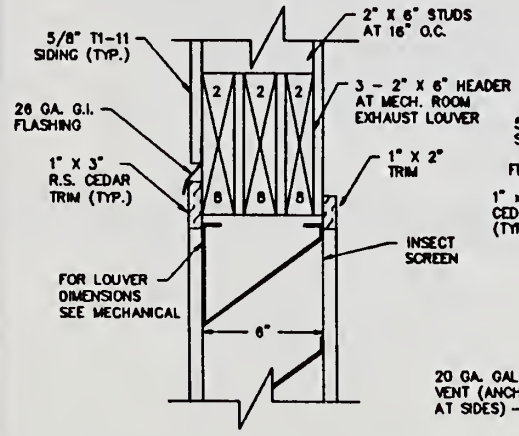
11/4 INTERIOR (4) DOOR
HEAD-SCALE: 3"=1'-0"



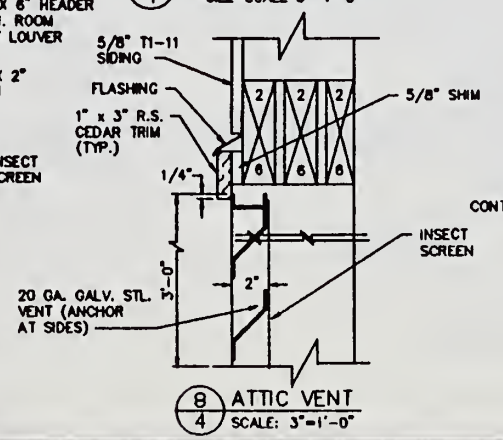
15/4 OVERHEAD DOOR (5)
SILL - SCALE 3" = 1'-0"



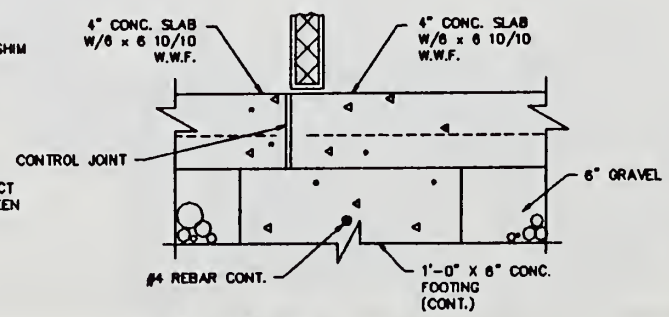
18/4 COOLER DOOR (1)
SILL-SCALE: 3"=1'-0"



4/4 LOUVER DETAIL
HEAD-SCALE: 3"=1'-0"



8/4 ATTIC VENT
SCALE: 3"=1'-0"



12/4 INTERIOR (4) DOOR
SILL - SCALE 3" = 1'-0"

DWG. NO.
AS080404
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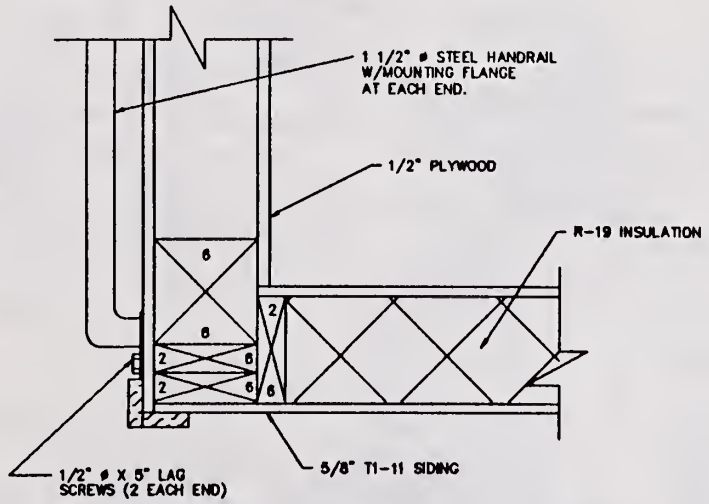
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
MT. BAKER - SNOQUALMIE NATIONAL FOREST
THE PACIFIC NORTHWEST REGION

NORTH BEND TREE COOLER

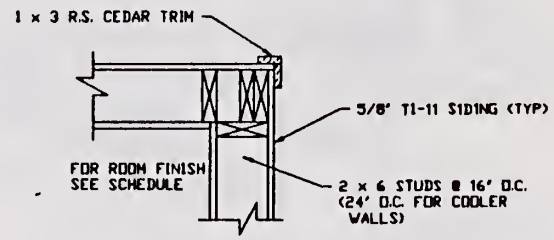
DRAWN DATE
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

MISCELLANEOUS DETAILS

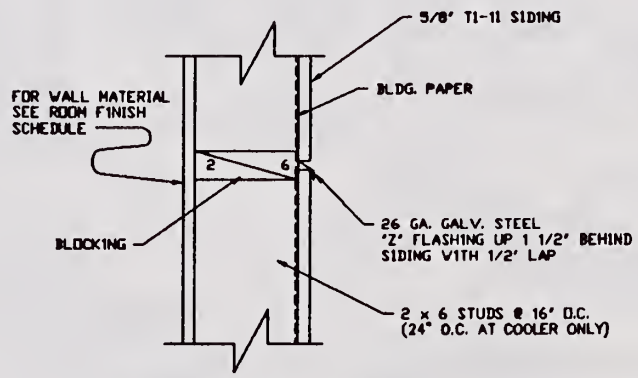
SHT. 4 OF



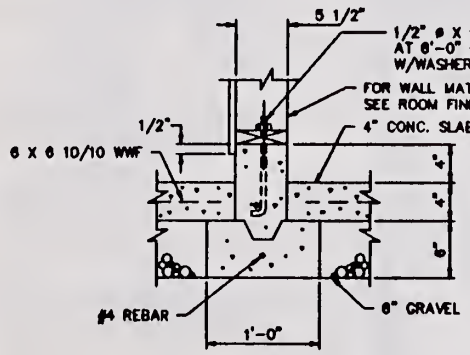
1/5 CORNER AT STAIR
SCALE 3" = 1'-0"



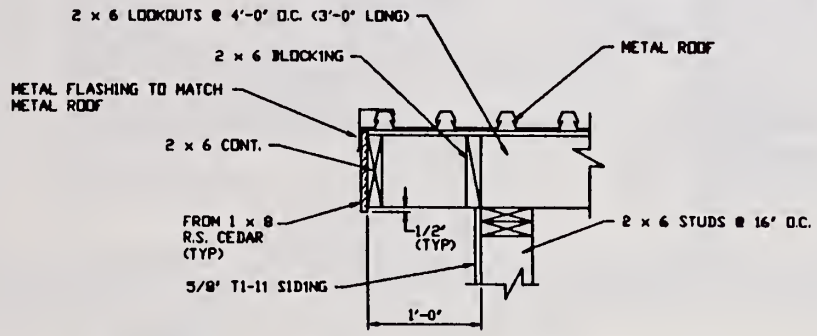
4/5 TYPICAL CORNER
SCALE: 1 1/2" = 1'-0"



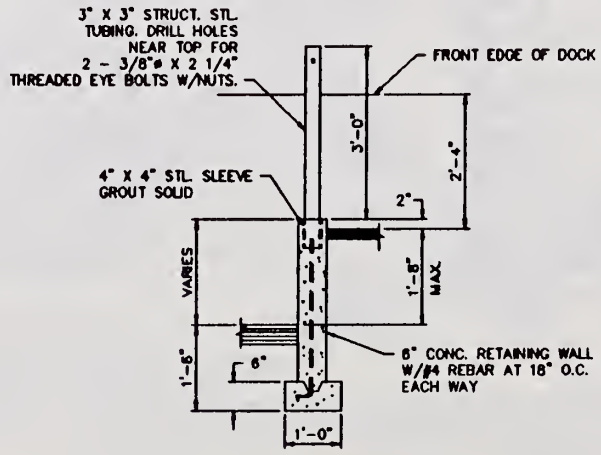
5/5 TYPICAL "Z" FLASHING
SCALE: 3" = 1'-0"



2/5 FOUNDATION
SCALE 1 1/2" = 1'-0"



3/5 TYPICAL RAKE
SCALE: 1 1/2" = 1'-0"



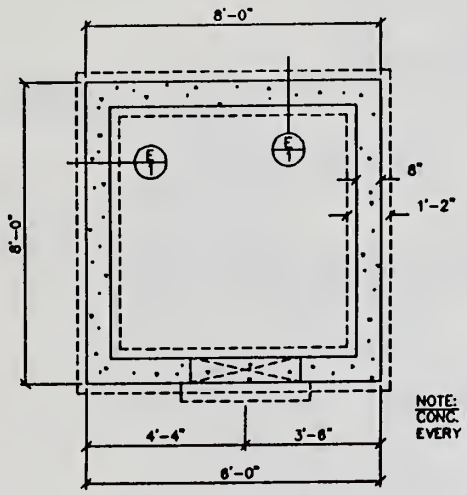
6/5 RETAINING WALL
SC[illegible] 1'-0"

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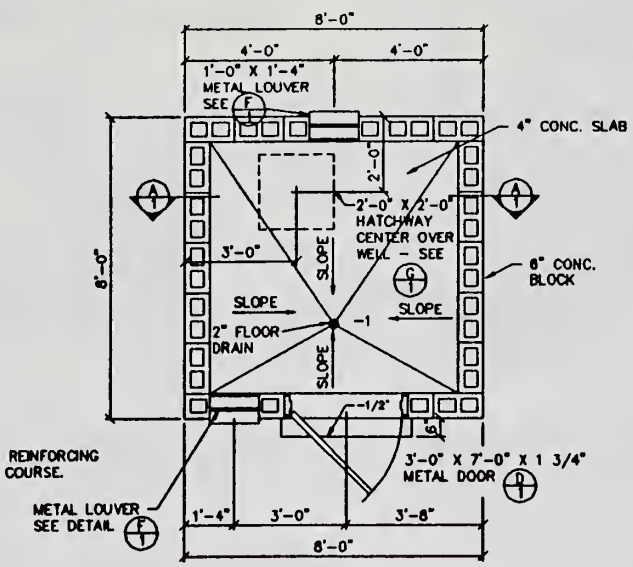
DWG. NO.
AS060405
24 NOV 87

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE MT. BAKER - SNOQUALMIE NATIONAL FOREST THE PACIFIC NORTHWEST REGION	NORTH BEND TREE COOLER
DRAWN ____ DATE ____ DESIGNED ____ DATE ____ CHECKED ____ DATE ____ REVIEWED ____ DATE ____	MISCELLANEOU[illegible] SHT. 5 OF

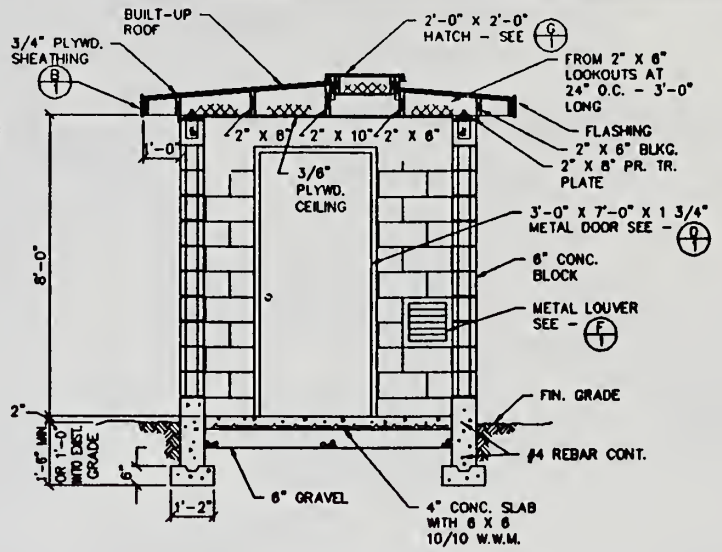
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FOUNDATION PLAN
SCALE 1/2" = 1'-0"



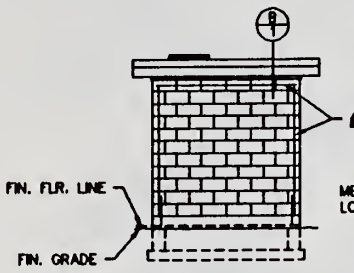
FLOOR PLAN
SCALE 1/2" = 1'-0"



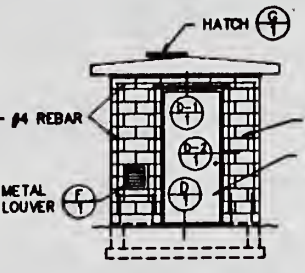
A1 SECTION
SCALE 1/2" = 1'-0"

NOTE:

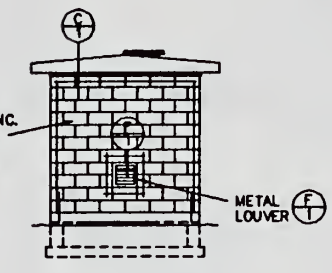
ROOF DESIGNED FOR 170#/S.F. SNOW LOAD.



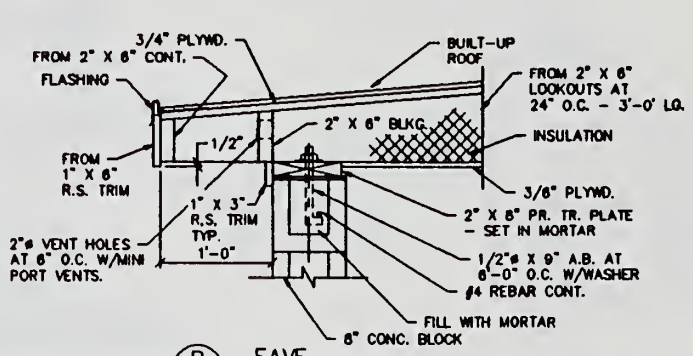
SIDE ELEVATION
SCALE 1/4" = 1'-0"



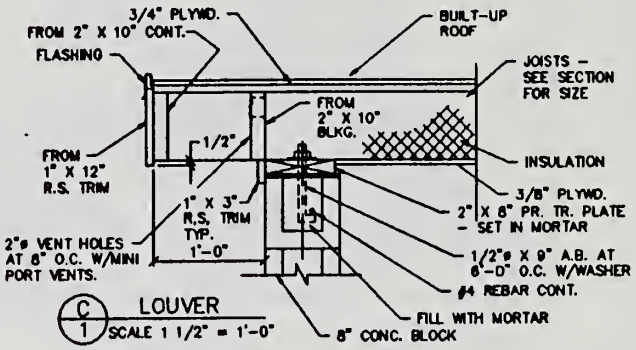
FRONT ELEVATION
SCALE 1/4" = 1'-0"



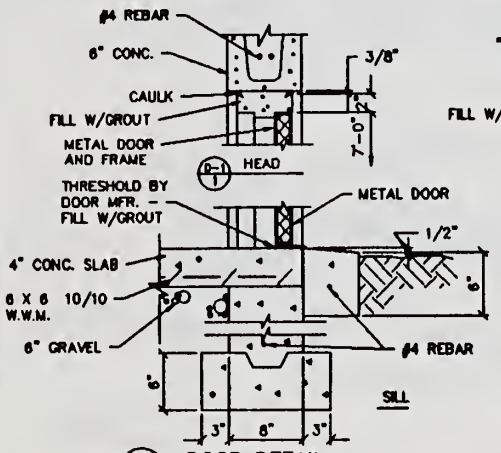
REAR ELEVATION
SCALE 1/4" = 1'-0"



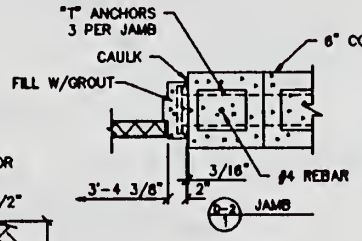
B1 EAVE
SCALE 1 1/2" = 1'-0"

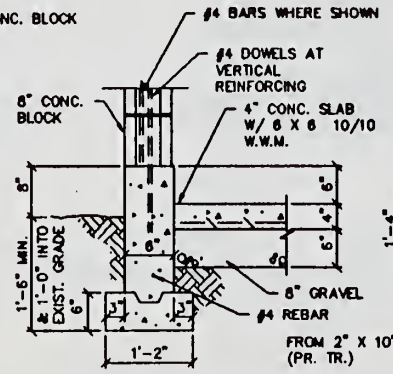


C1 LOUVER
SCALE 1 1/2" = 1'-0"

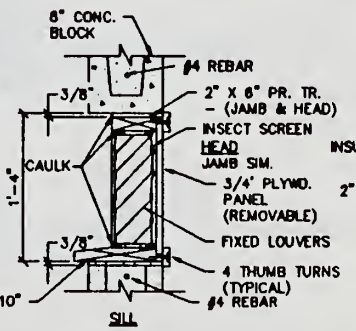


D1 DOOR DETAIL
SCALE 1 1/2" = 1'-0"

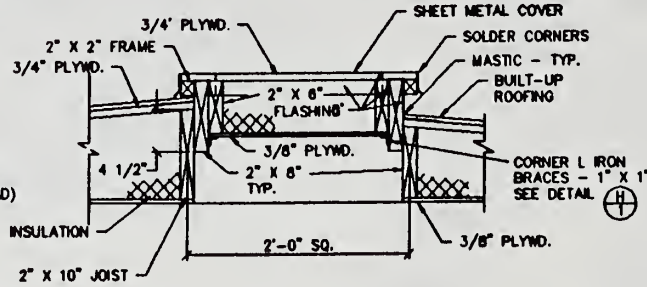




E1 FOUNDATION
SCALE 1" = 1'-0"



F1 LOUVER
SCALE 1 1/2" = 1'-0"



G1 HATCH
SCALE 1 1/2" = 1'-0"



H1 SCALE 3" = 1'-0"

DWG. NO.
AS090001
9 DEC 87

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
R-6
The Pacific Northwest Region

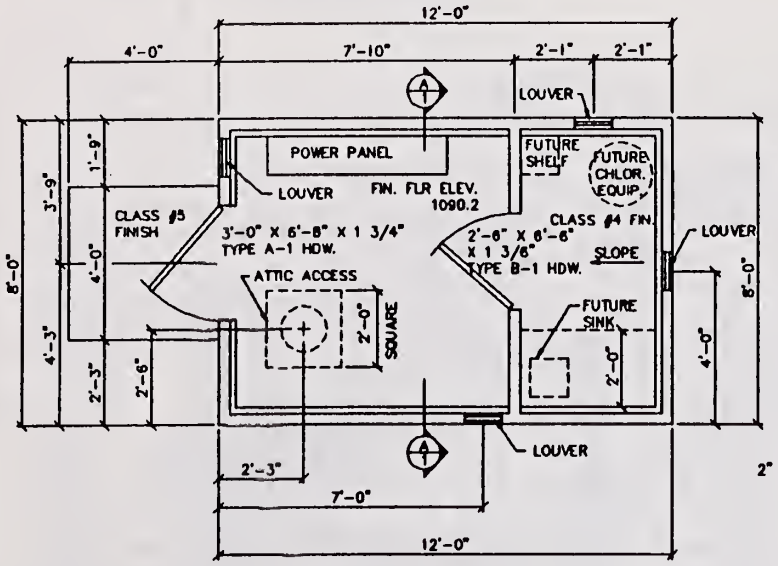
Drown
Design
Checked
Reviewed

Forest
Project

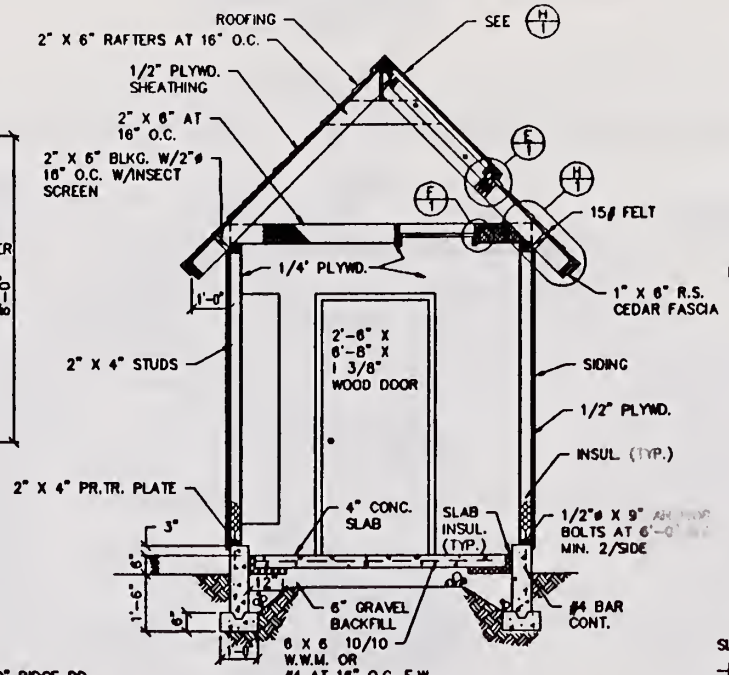
8 X 8 PUMPHOUSE
CEMENT BLOCK

Sht
Of

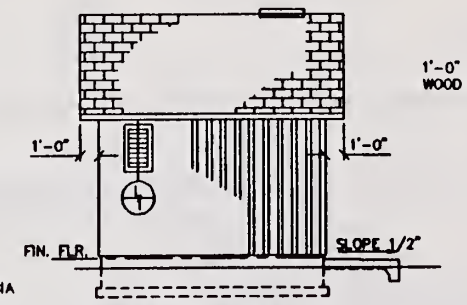
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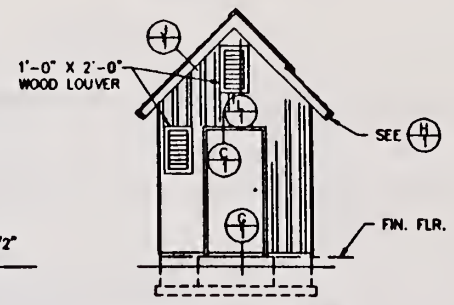
FLOOR PLAN
SCALE 1/2" = 1'-0"



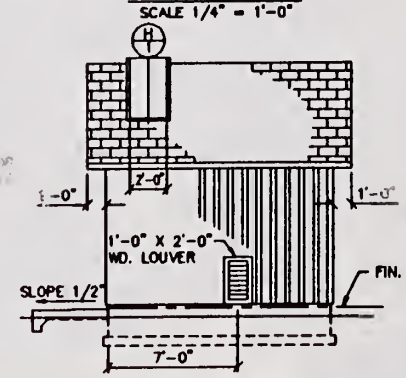
SECTION
SCALE 1 1/2" = 1'-0"



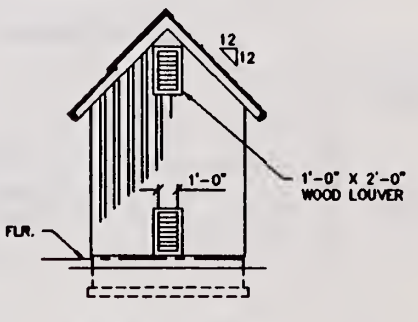
SIDE ELEVATION
SCALE 1/4" = 1'-0"



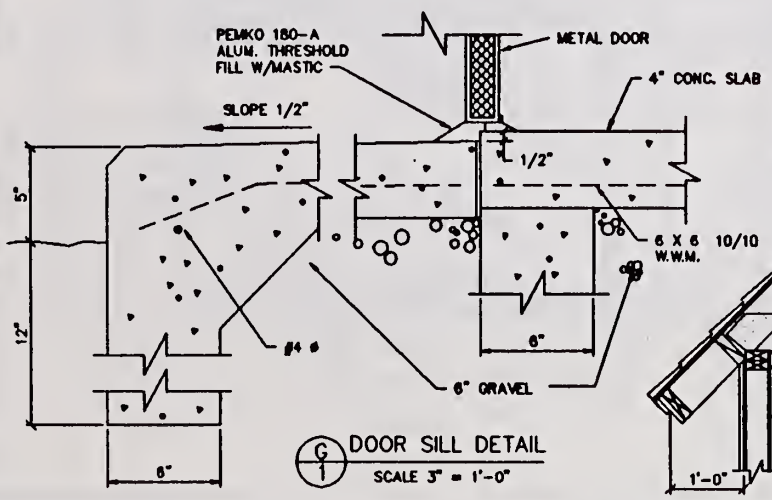
FRONT ELEVATION
SCALE 1/4" = 1'-0"



SIDE ELEVATION
SCALE 1/4" = 1'-0"

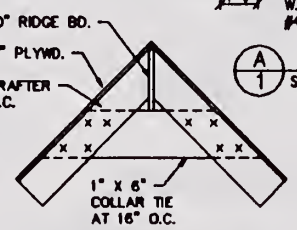


REAR ELEVATION
SCALE 1/4" = 1'-0"

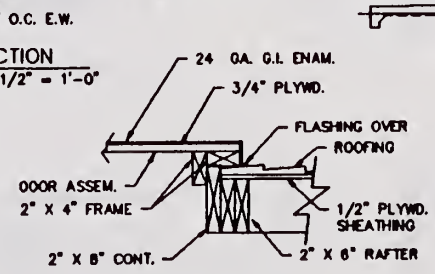


B 1 INT. DR. DETAIL
HEAD - JAMB SIMILAR
SCALE 3" = 1'-0"

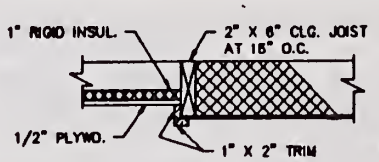
C 1 EXT. DR. DETAIL
HEAD - JAMB SIMILAR
SCALE 3" = 1'-0"



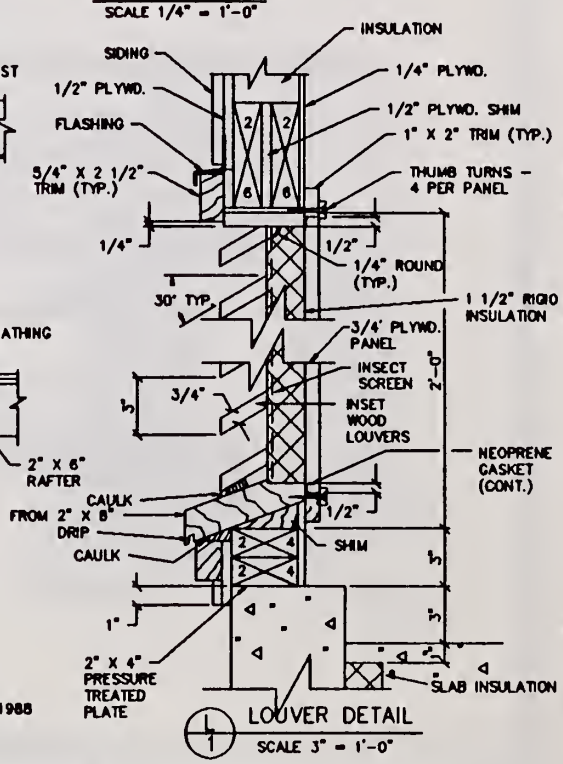
D 1 RIDGE FRAME DET.
SCALE 1" = 1'-0"



E 1 ROOF HATCH
SCALE 1 1/2" = 1'-0"

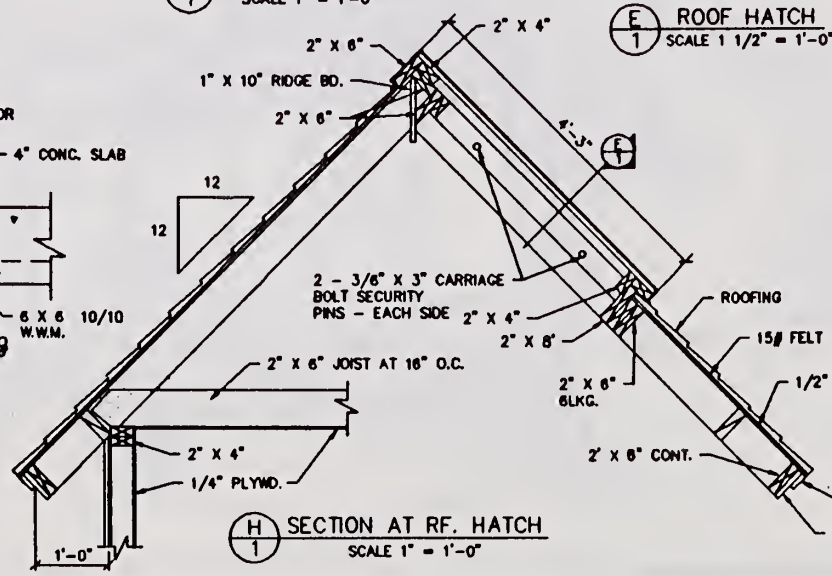


F 1 ATTIC ACCESS
SCALE 1 1/2" = 1'-0"

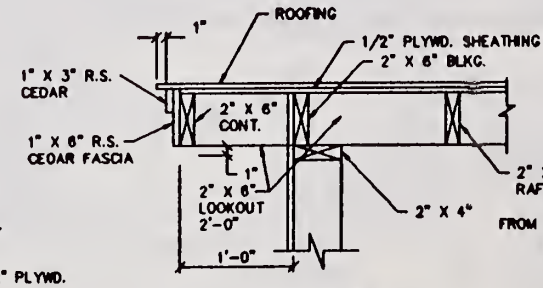


L 1 LOUVER DETAIL
SCALE 3" = 1'-0"

G 1 DOOR SILL DETAIL
SCALE 3" = 1'-0"



H 1 SECTION AT RF. HATCH
SCALE 1" = 1'-0"



J 1 RAKE DETAIL
SCALE 1 1/2" = 1'-0"

AS090101 APRIL 6,1988

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
R-6
Pac Northwest Region

Drown
Design
Checked
Reviewed

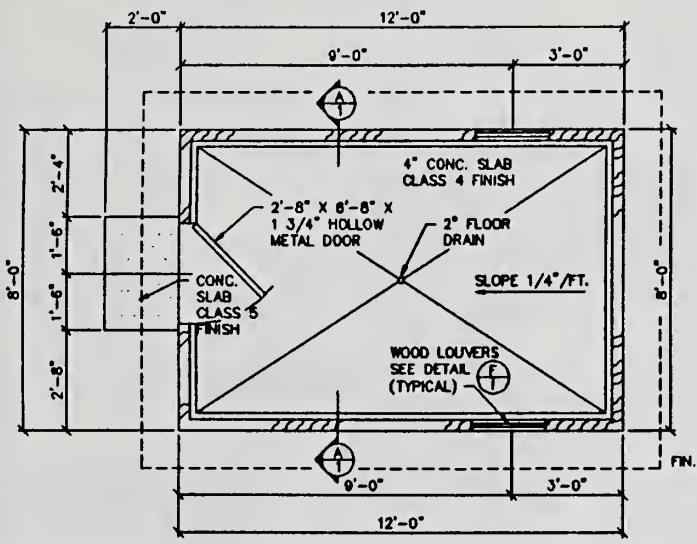
Forest
Project

8X12 PUMPHOUSE
WOOD FRAME
STEEP PITCH

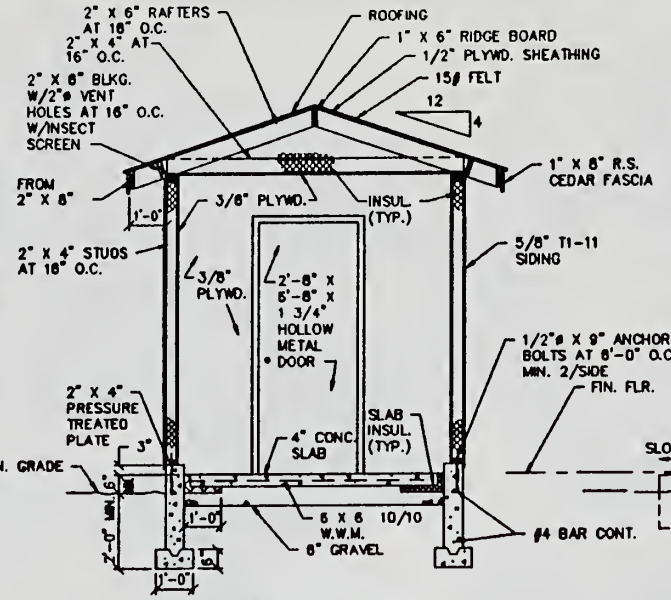
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Of

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

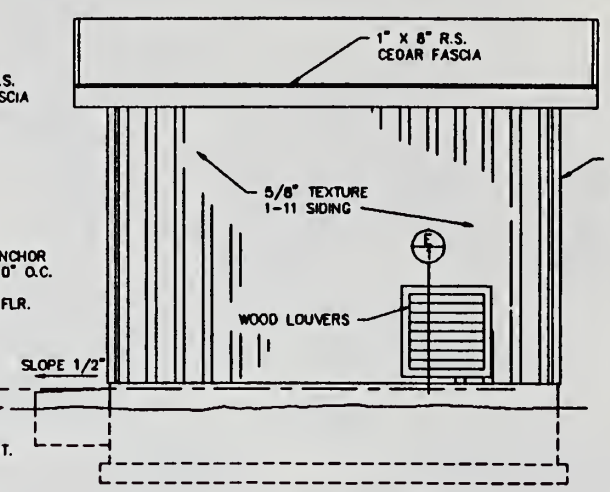
THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.



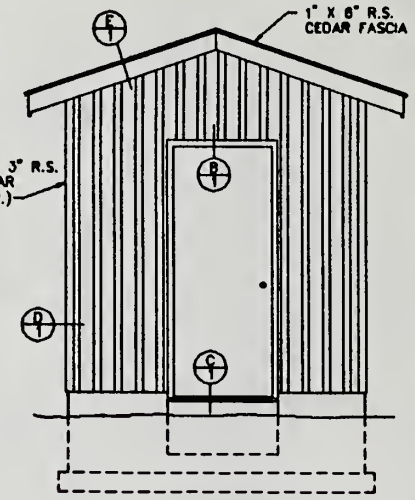
FLOOR PLAN
SCALE 1/2" = 1'-0"



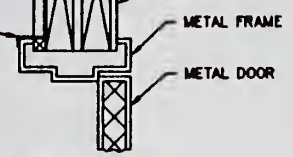
A/1 SIDE ELEVATION
SCALE 1/2" = 1'-0"



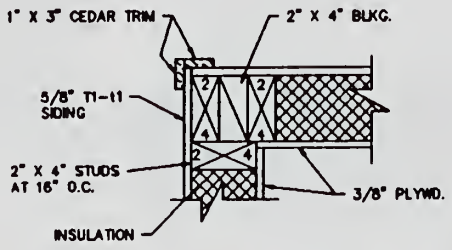
SIDE ELEVATION
SCALE 1/2" = 1'-0"



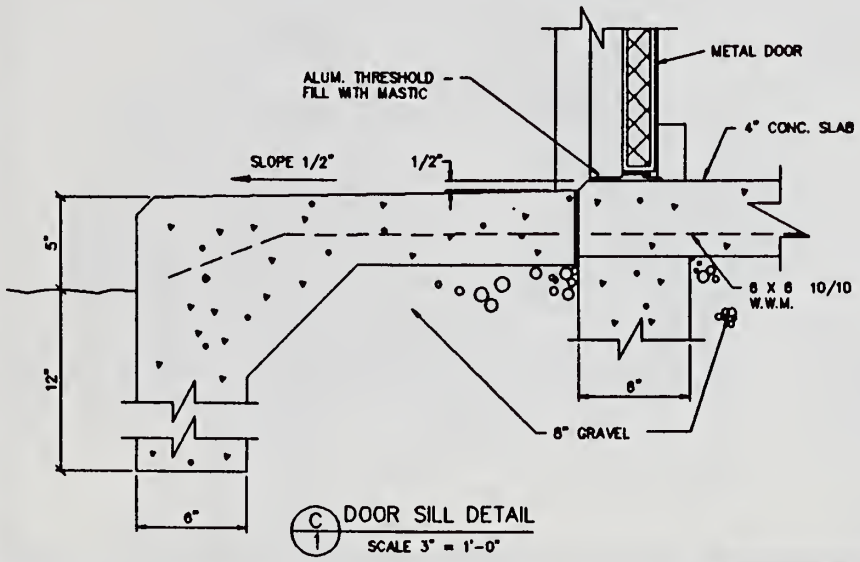
FRONT ELEVATION
SCALE 1/2" = 1'-0"



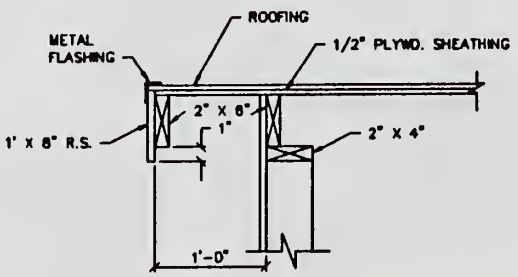
B/1 DOOR HEAD DET.
3" = 1'-0" (JAMB SIMILAR)



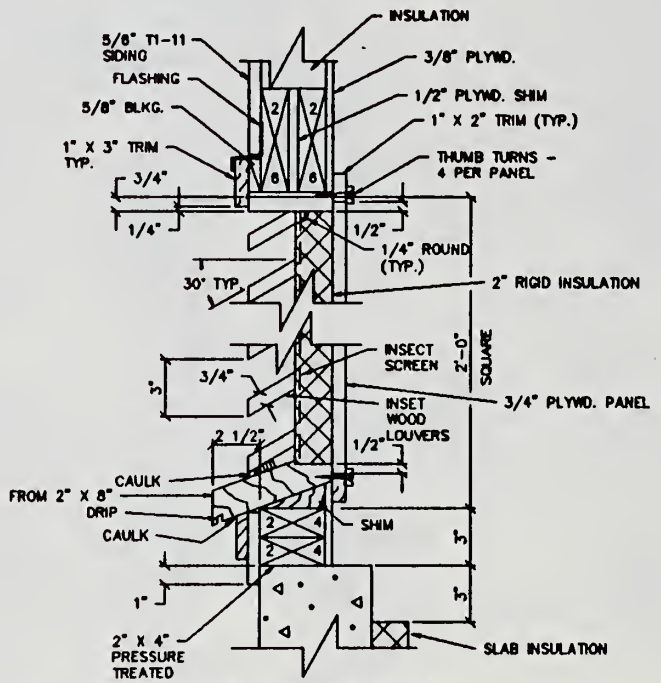
D/1 TYPICAL CORNER
SCALE 3" = 1'-0"



C/1 DOOR SILL DETAIL
SCALE 3" = 1'-0"



E/1 RAKE DETAIL
SCALE 1 1/2" = 1'-0"

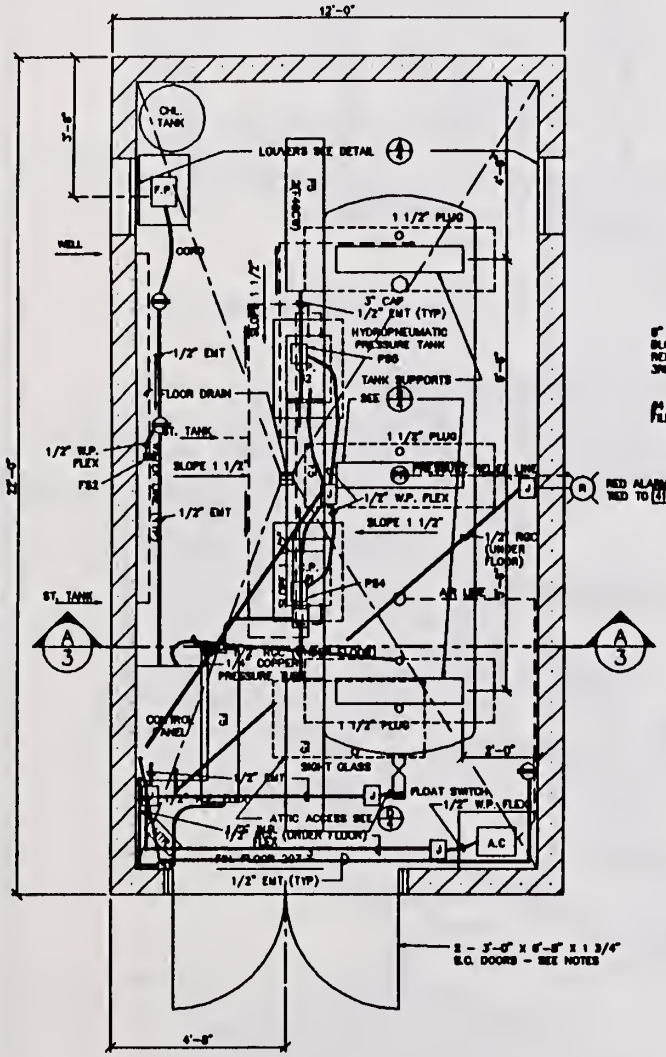


F/1 LOUVER DETAIL
SCALE 3" = 1'-0"

DWG. NO.
AS090201
10 DEC 87

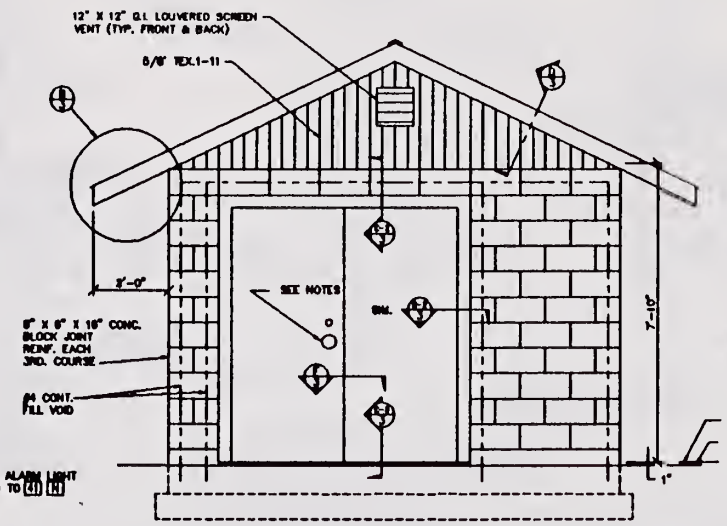
U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE R—6 The Pacific Northwest Region		Drawn Design Checked Reviewed		Forest Project	8X12 PUMPHOUSE WOOD FRAMED LOW PITCHED ROOF

Sht
Of



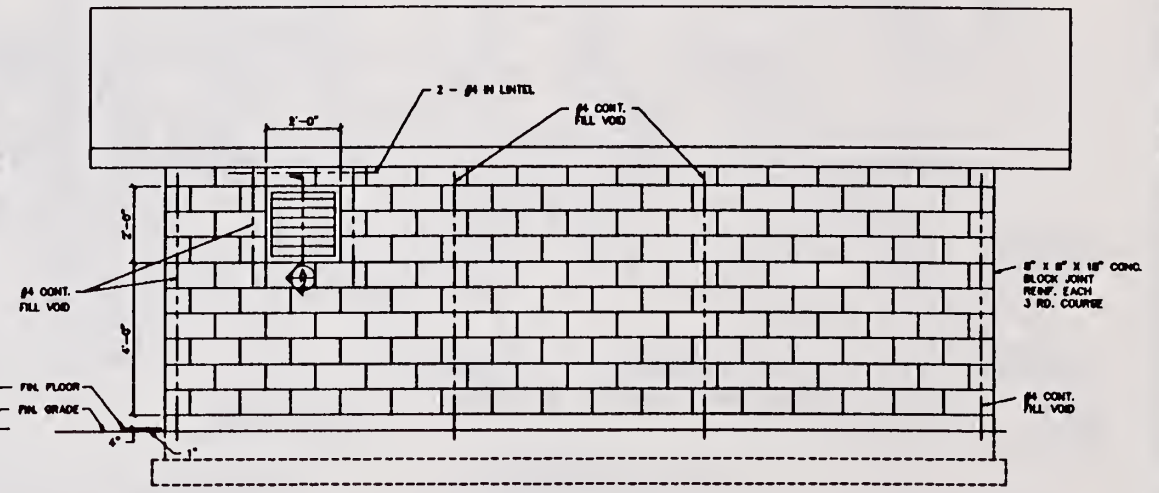
FLOOR PLAN

1/2" = 1'-0"



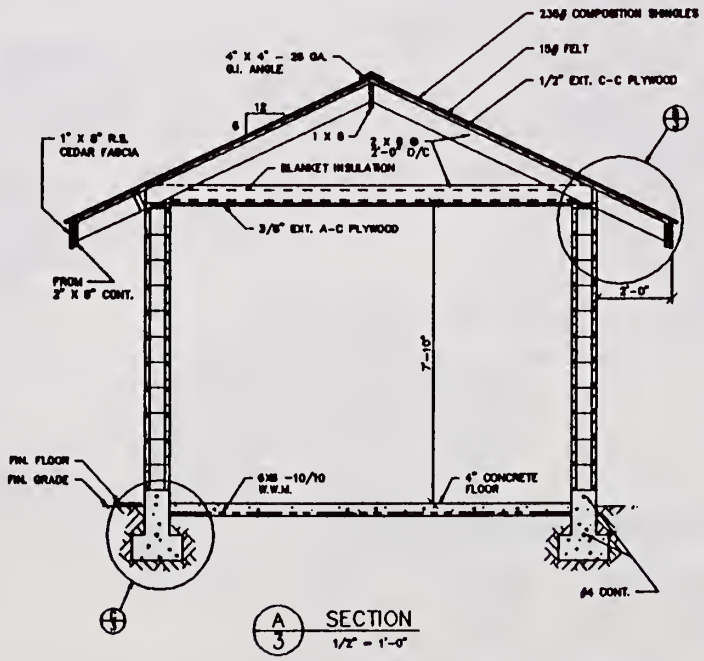
FRONT ELEVATION

1/2" = 1'-0"



SIDE ELEVATION

1/2" = 1'-0"



A/3 SECTION

1/2" = 1'-0"

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GENERAL NOTES:

DOOR:

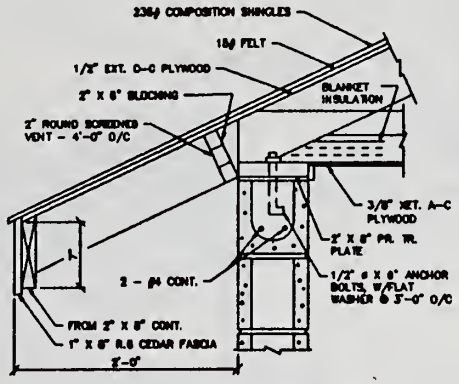
1. TYPE A-8, 3 PR. BUTTS, F.S. FF-H-116, TYPE 3127 4" X 4", U.S. 26D.
2. LATCHSET, F.S. FF-H-106, 160 N-4, U.S. 26D.
3. FOOTBOLT, F.S. FF-H-111, TYPE F10218, JAPANNED BLACK.
4. CHAIN BOLT, F.S. FF-H-111, TYPE F1021A, JAPANNED BLACK.
5. FOREST SERVICE LOCK, FURNISH BY THE FOREST SERVICE AND INSTALLED BY THE CONTRACTOR.

DWG. NO.
AS090301
26 OCT 87

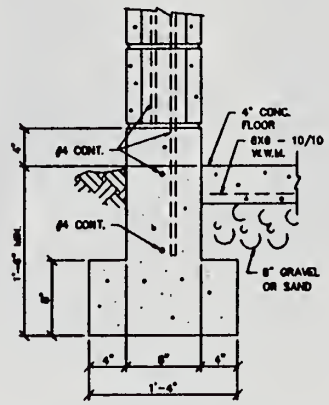
U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE THE PACIFIC NORTHWEST REGION	22' X 12' PUMP HOUSE
DRAWN ____ DATE ____ DESIGNED ____ DATE ____ CHECKED ____ DATE ____ REVIEWED ____ DATE ____	NORWOOD QUINA ... ITEM SHT. OF

THIS SHEET IS DISTRIBUTED FOR

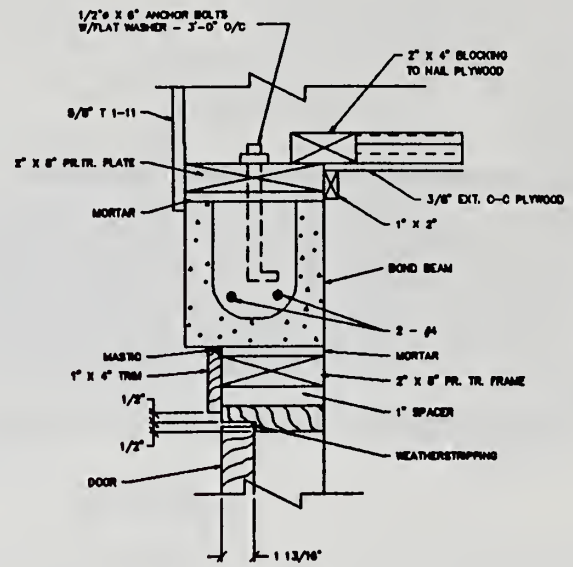
THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.



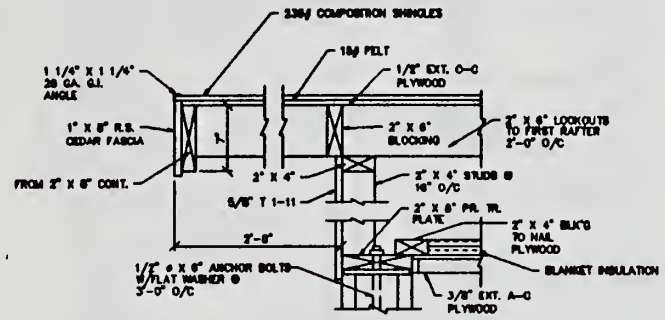
B/3 EAVE DETAIL
1 1/2" = 1'-0"



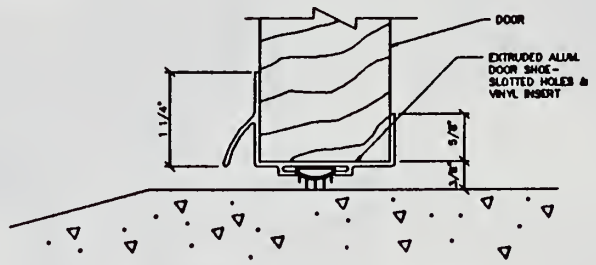
C/3 FOUNDATION DETAIL
1 1/2" = 1'-0"



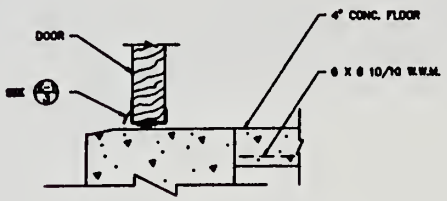
E2/3 DOOR HEADER (JAMB SIMILAR)
3" = 1'-0"



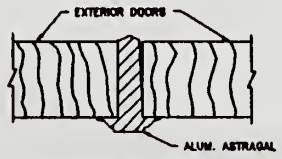
D/3 RAKE DETAIL
1 1/2" = 1'-0"



E1/3 THRESHOLD DETAIL
FULL SIZE



E3/3 DOOR AT THRESHOLD
3" = 1'-0"

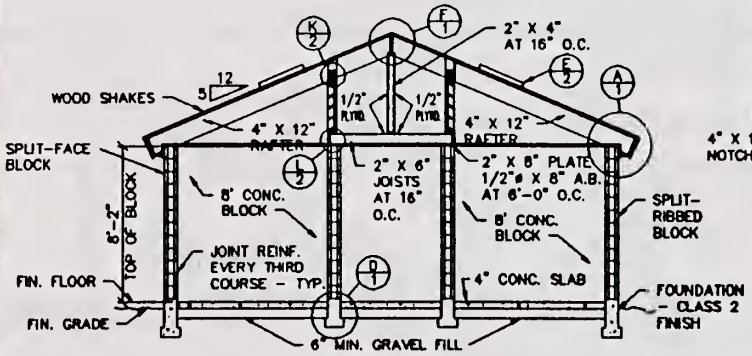


F/3 DOOR DETAIL

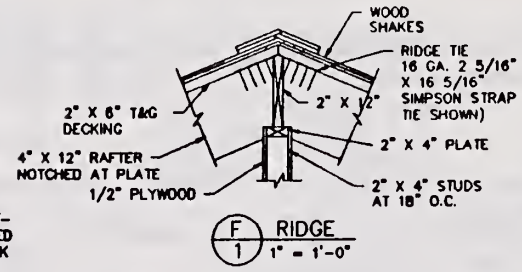
DWG. NO.
AS090302
27 OCT 87

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE THE PACIFIC NORTHWEST REGION	22' X 12' PUMP HOSE DETAILS
DRAWN DATE DESIGNED DATE CHECKED DATE REVIEWED DATE	NORWOOD WATER SYSTEM QUINAULT DISTRICT SHT. OF

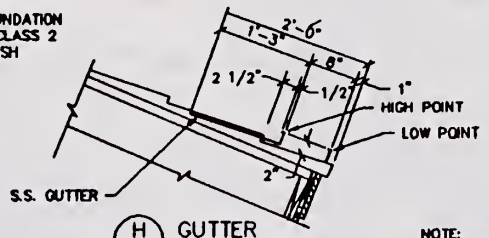
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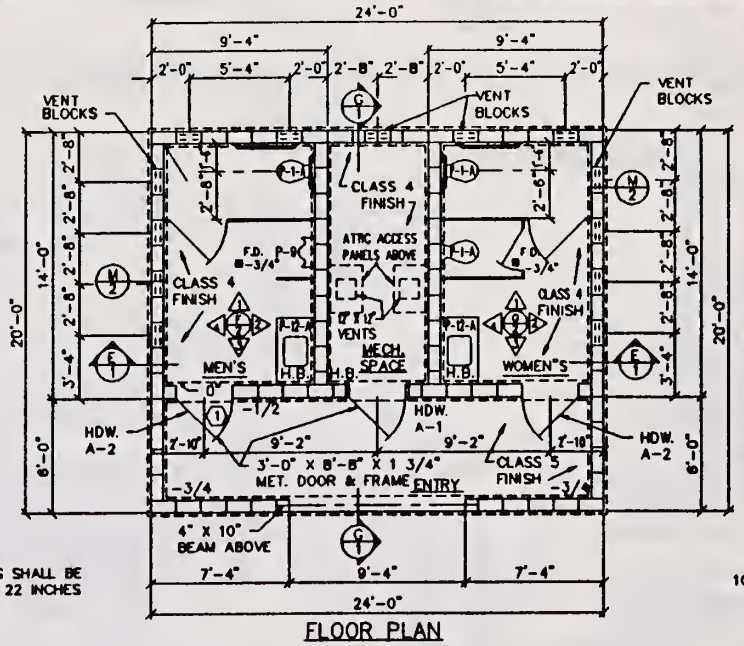
E/1 SECTION
1/4" = 1'-0"



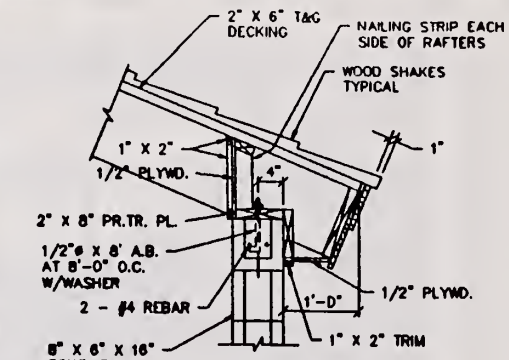
F/1 RIDGE
1" = 1'-0"



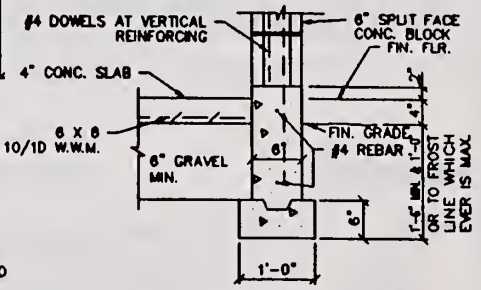
H/1 GUTTER
1" = 1'-0"



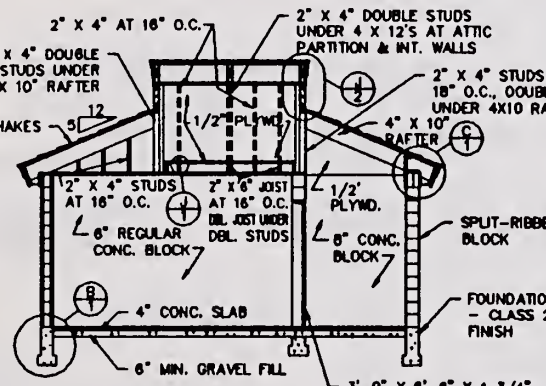
FLOOR PLAN
SCALE 1/4" = 1'-0"



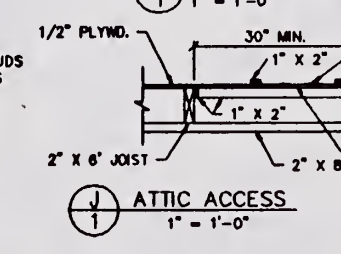
A/1 EAVE DETAIL
1" = 1'-0"



B/1 FOOTING DETAIL
1" = 1'-0"

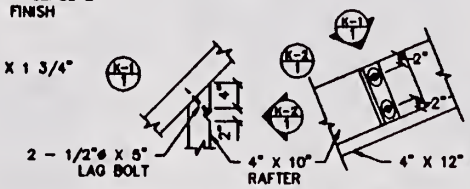


G/1 SECTION
1/4" = 1'-0"

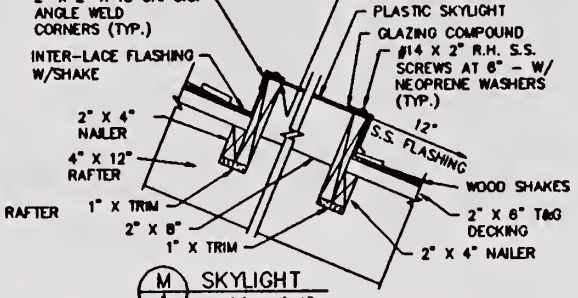


J/1 ATTIC ACCESS
1" = 1'-0"

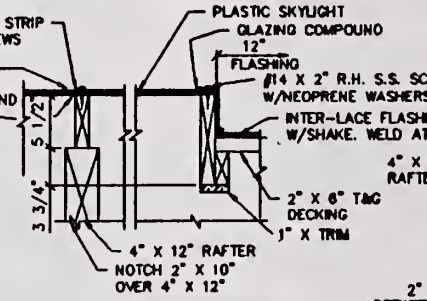
NOTE:
ACCESS OPENING SHALL BE NOT LESS THAN 22 INCHES BY 30 INCHES.



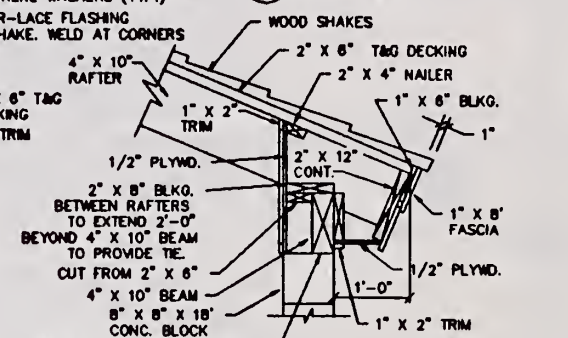
K/1 RAFTER CONNECTION
1" = 1'-0"



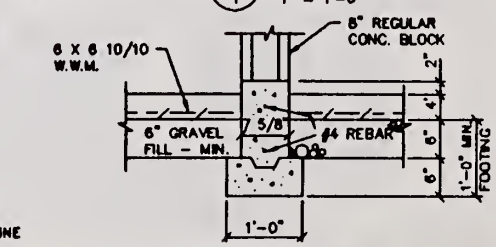
M/1 SKYLIGHT
1 1/2' = 1'-0"



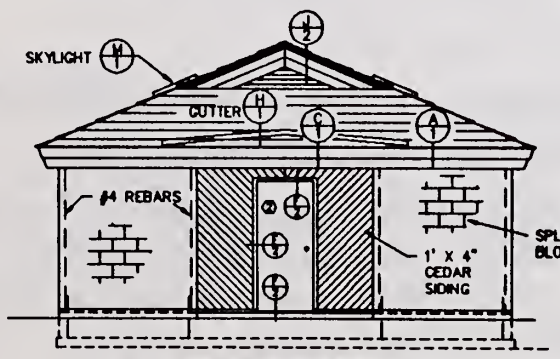
L/1 SKYLIGHT
1 1/2' = 1'-0"



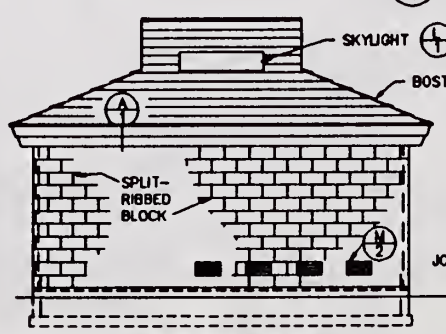
C/1 EAVE DETAIL
1" = 1'-0"



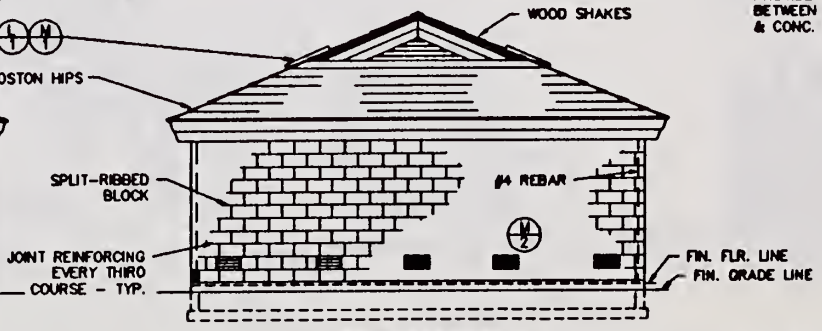
D/1 FOOTING DETAIL
AT ENTRY 1" = 1'-0"



FRONT ELEVATION
SCALE 1/4" = 1'-0"



RIGHT ELEVATION
SCALE 1/4" = 1'-0"
SIMILAR TO LEFT ELEVATION



REAR ELEVATION
SCALE 1/4" = 1'-0"

DWG. NO.
AS110601
6 DEC 67

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
R-6
Northwest Region

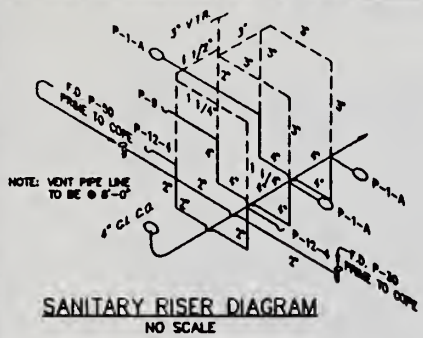
Drawn
Design
Checked
Reviewed

Forest
Project

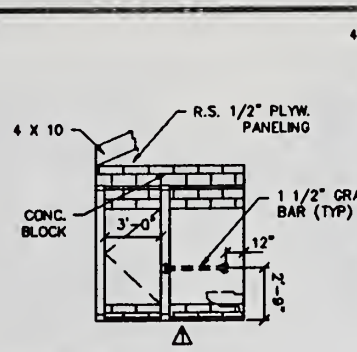
COMFORT STATION
GOLD BEA

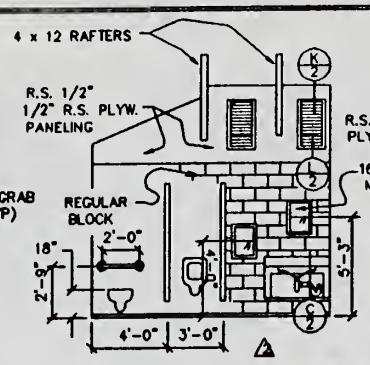
Sht 1
Of 2

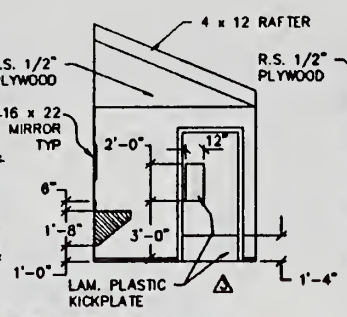
THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

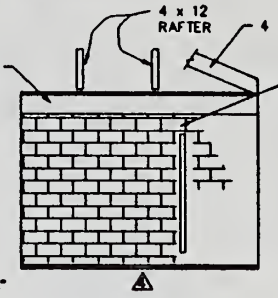


SANITARY RISER DIAGRAM
NO SCALE

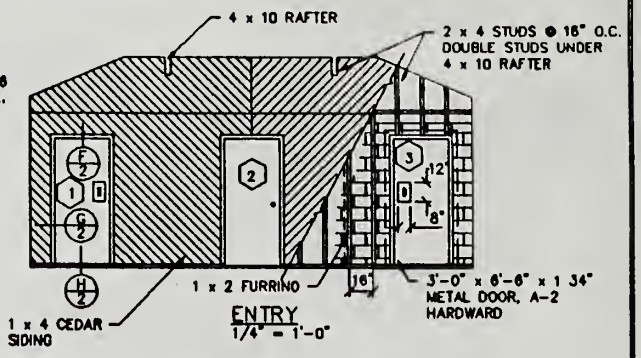




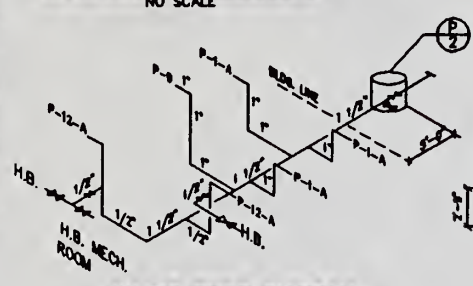




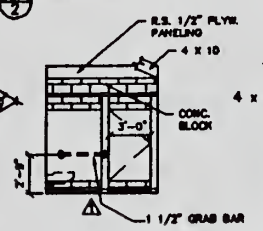
MEN'S TOILET ROOM
1/4" = 1'-0"

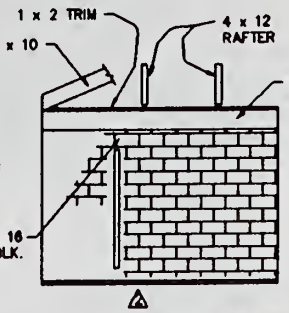


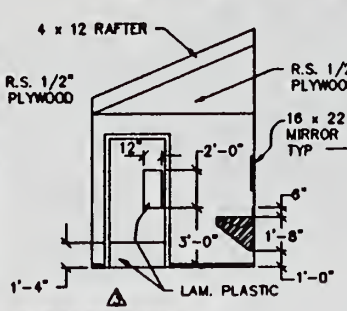
ENTRY
1/4" = 1'-0"

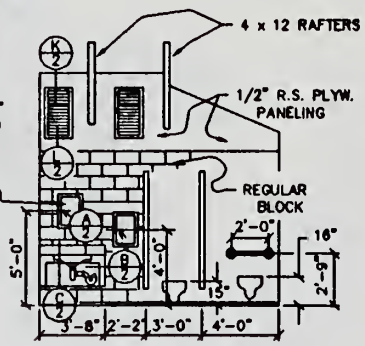


WATER RISER DIAGRAM
NO SCALE

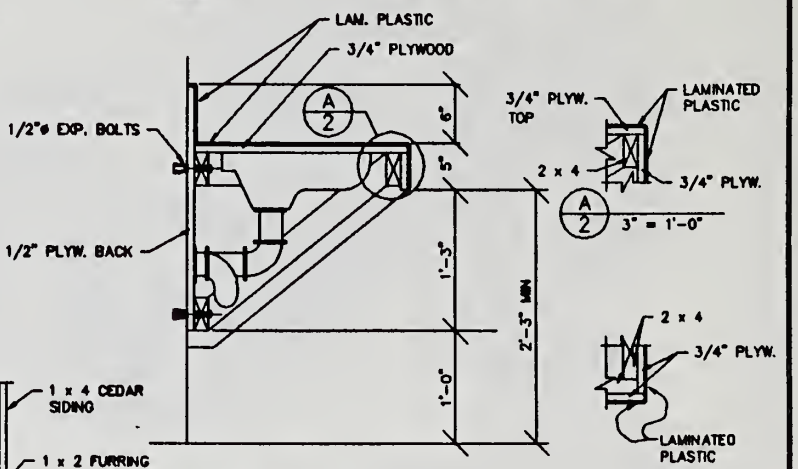






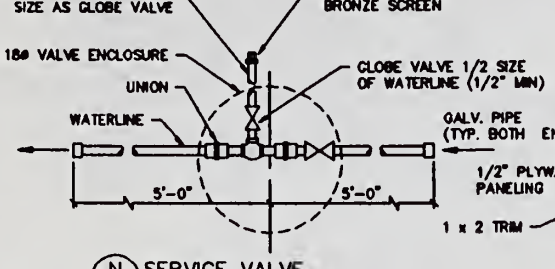


WOMEN'S TOILET ROOM
1/4" = 1'-0"

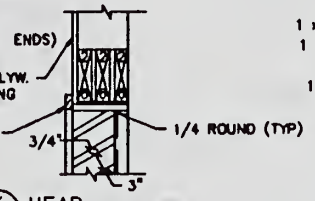


C/2 SINK
1 1/2" = 1'-0"

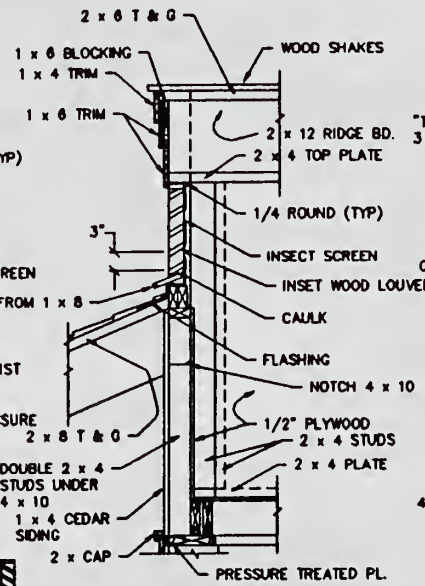
B/2 COUNTER
3" = 1'-0"

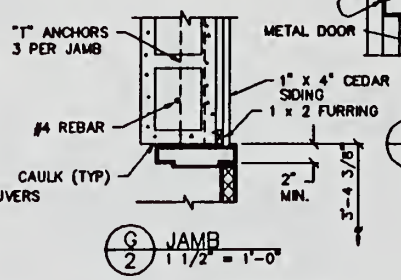


N/2 SERVICE VALVE
TO DAYLIGHT-NO SCALE

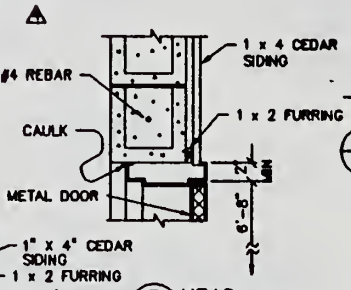


K/2 HEAD
INT. 1 1/2" = 1'-0"

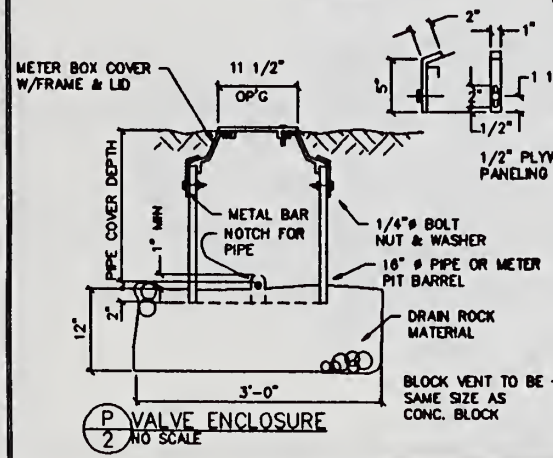




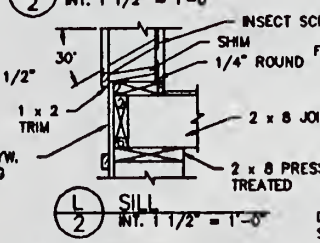
G/2 JAMB
1 1/2" = 1'-0"



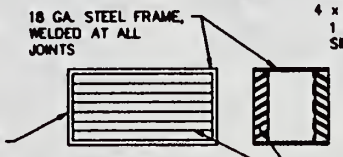
F/2 HEAD
1 1/2" = 1'-0"



P/2 VALVE ENCLOSURE
NO SCALE

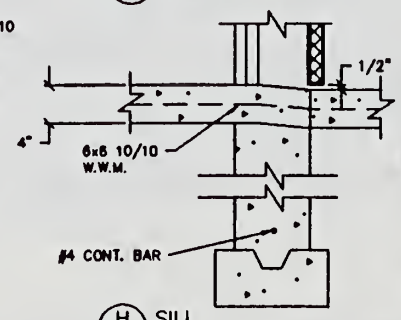


L/2 SILL
INT. 1 1/2" = 1'-0"



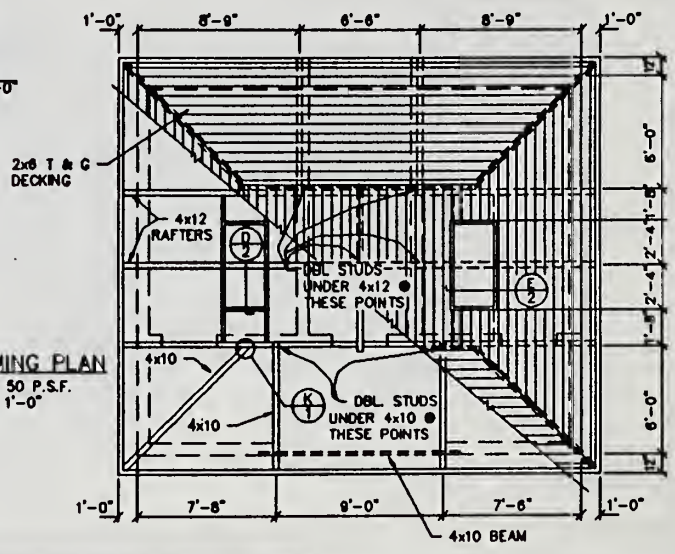
M/2 BLOCK VENT
1 1/2" = 1'-0"

J/2 LOUVER DETAIL
EXT. 1" = 1'-0"



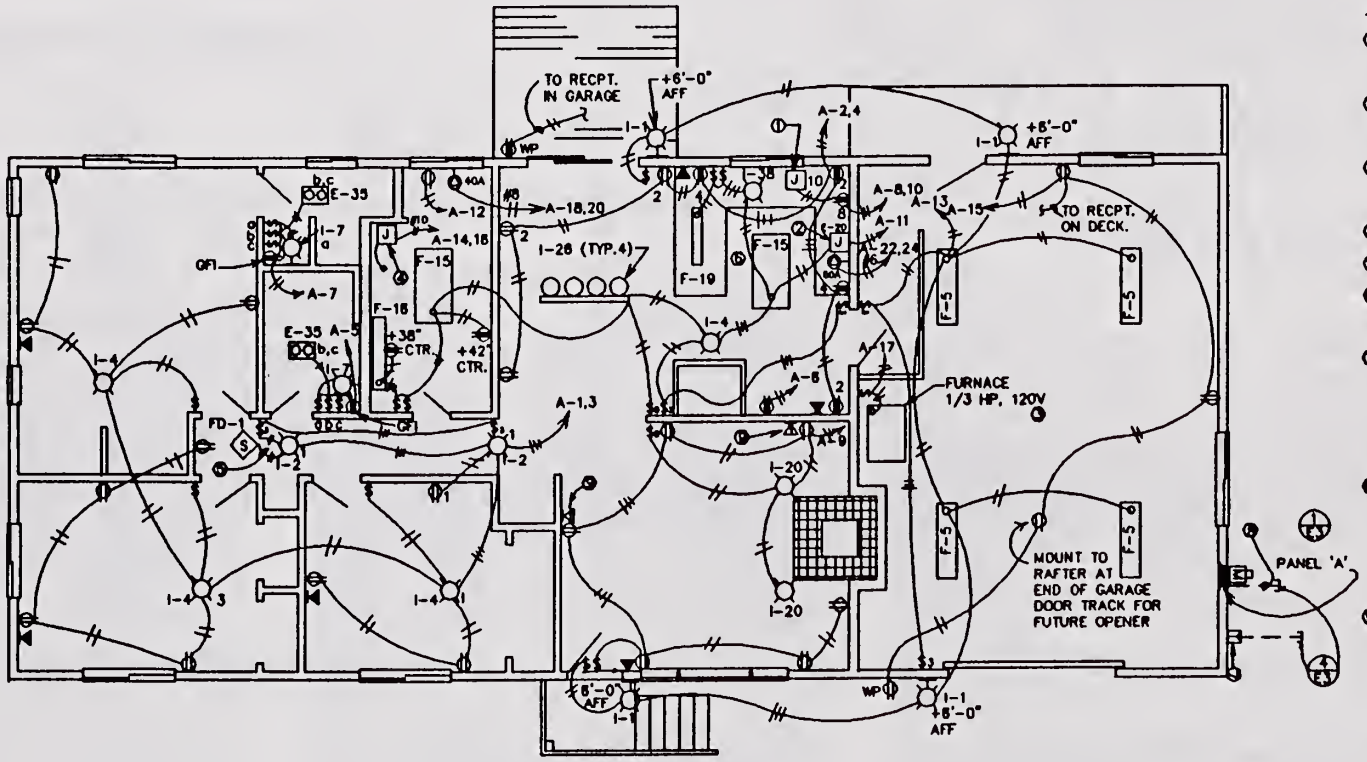
H/2 SILL
1 1/2" = 1'-0"

ROOF FRAMING PLAN
SNOW LOAD 50 P.S.F.
1/4" = 1'-0"



OWO. NO.
AS110602
6 DEC 87

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE R-6 The Pacific Northwest Region		Drawn		Forest	COMFORT STATION	Sht 2
		Design		Project	GOLD BEACH	Of 2
		Checked				
		Reviewed				



NOTES:

① CONNECTION POINT FOR UNDERCOUNTER DISHWASHER. CONNECT TO EQUIPMENT PROVIDED BY OTHERS.

② CONNECTION POINT FOR HOOD LIGHT AND FAN. PROVIDE EQUIPMENT TYPE E-20 (SEE SPECS.) AND ALL CONNECTIONS REQUIRED.

③ FIXTURES IN THIS AREA ONLY TO BE PROVIDED WITH ZERO (0) DEGREE COLD WEATHER BALLASTS.

④ CONNECTION POINT FOR WATER HEATER.

⑤ CONNECT TO UNSWITCHED LEG.

⑥ ALL KITCHEN RECEPTACLES TO BE MOUNTED AT +44" TO CENTER OF DEVICE.

⑦ PROVIDE 2" GRC CONDUIT ONLY STUBBED OUT FOR TELEPHONE SERVICE PER DETAIL 4/E3. COORDINATE EXACT LOCATION OF STUB OUT WITH SITE UTILITIES CONTRACTOR. CONTACT MR. BOB CAMPBELL OF TELEPHONE UTILITIES CO. (503)250-7219 TO COORDINATE SERVICE AND PREWIRING PRIOR TO CONSTRUCTION.

⑧ PROVIDE 2" GRC CONDUIT AND CONDUCTORS STUBBED OUT FOR POWER SERVICE PER DETAIL 4/E3. COORDINATE EXACT LOCATION OF STUB OUT WITH SITE UTILITIES CONTRACTOR. CONTACT MR. JIM BLAYLOCK OF CENTRAL OREGON CO-OP (503)548-2144 TO COORDINATE SERVICE PRIOR TO CONSTRUCTION.

⑨ PROVIDE 3/4" C. FROM TELEVISION OUTLET TO ACCESSIBLE ATTIC OR CRAWLSPACE.

NOTE:

THIS PLAN FOR ALTERNATE 1 WORK. BASIC BID TO BE IDENTICAL BUT OPPOSITE HAND. SEE SHEET 2.

N

POWER & LIGHTING PLAN
SCALE: 1/4" = 1'-0"

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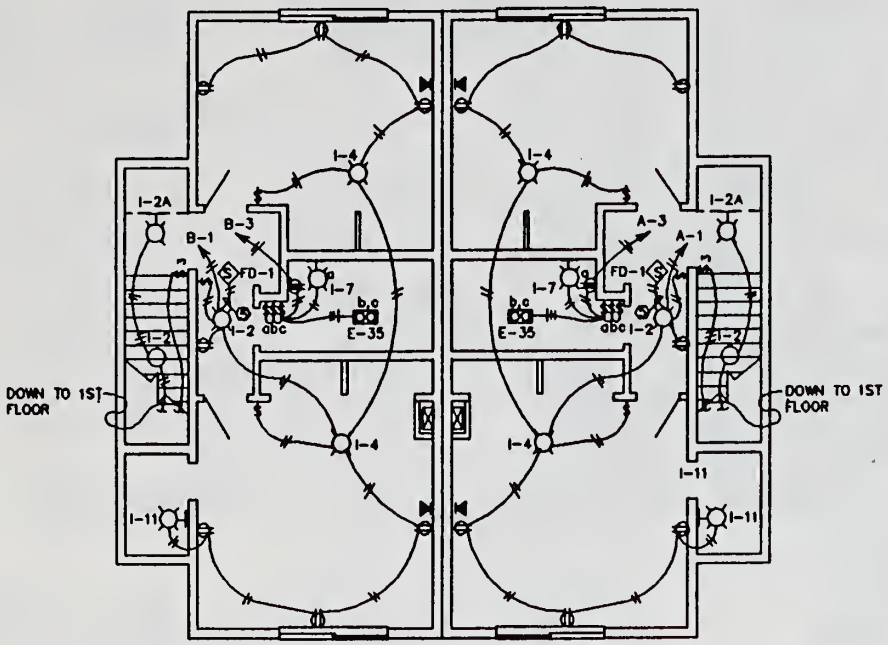
E0084000
SEPT. 3, 1986

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE OCHOCO NATIONAL FOREST THE PACIFIC NORTHWEST REGION DRAWN DATE DESIGNED DATE CHECKED DATE REVIEWED DATE	STANDARD 3 BDR RESIDENCE RAGER RESIDENCES POWER & LIGHTING PLAN SHT. E1 OF

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

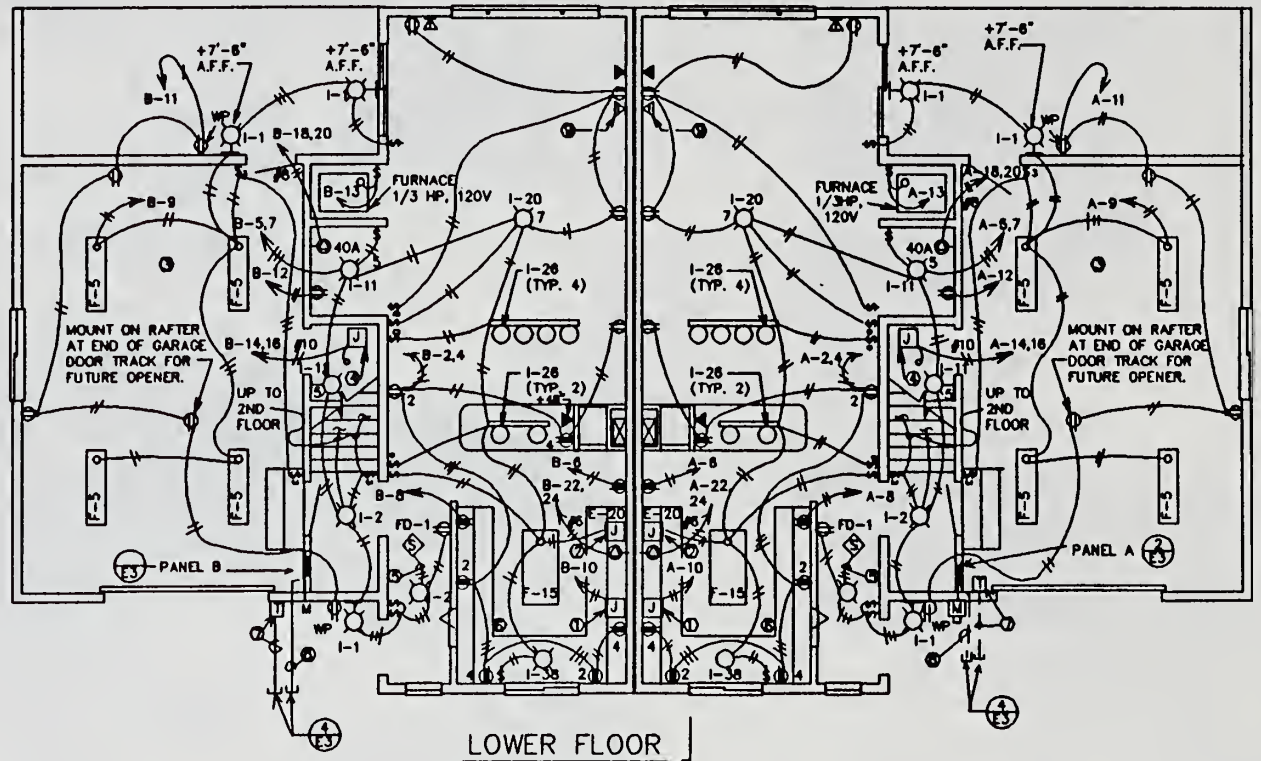
NOTES:

1. CONNECTION POINT FOR UNDERCOUNTER DISHWASHER. CONNECT TO EQUIPMENT PROVIDED BY OTHERS.
2. CONNECTION POINT FOR HOOD LIGHT AND FAN. PROVIDE EQUIPMENT TYPE E-20 (SEE SPECS.) AND ALL CONNECTIONS REQUIRED.
3. FIXTURES IN THIS AREA ONLY TO BE PROVIDED WITH ZERO (0) DEGREE COLD WEATHER BALLASTS.
4. CONNECTION POINT FOR WATER HEATER.
5. CONNECT TO UNSWITCHED LEG.
6. ALL KITCHEN RECEPTACLES TO BE MOUNTED AT +44" TO CENTER OF DEVICE.
7. PROVIDE 2" GRC CONDUIT ONLY STUBBED OUT FOR TELEPHONE SERVICE PER DETAIL 4/E3. COORDINATE EXACT LOCATION OF STUB OUT WITH SITE UTILITIES CONTRACTOR. CONTACT MR. BOB CAMPBELL OF TELEPHONE UTILITIES CO. (503)259-7219 TO COORDINATE SERVICE AND PREWIRING PRIOR TO CONSTRUCTION.
8. PROVIDE 2" GRC CONDUIT AND CONDUCTORS STUBBED OUT FOR POWER SERVICE PER DETAIL 4/E3. COORDINATE EXACT LOCATION OF STUB OUT WITH SITE UTILITIES CONTRACTOR CONTACT MR. JIM BLAYLOCK OF CENTRAL OREGON CO-OP (503)548-2144 TO COORDINATE SERVICE PRIOR TO CONSTRUCTION.
9. PROVIDE 3/4" C. FROM TELEVISION OUTLET TO ACCESSIBLE ATTIC OR CRAWLSPACE.



UPPER FLOOR
SCALE: 1/4" = 1'-0"

N



LOWER FLOOR
SCALE: 1/4" = 1'-0"

N

E0084100
SEPT 4, 1986

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE OCHOCO NATIONAL FOREST THE PACIFIC NORTHWEST REGION	2 BDR 2 STORY STANDARD DUPLEX RAGER RESIDENCES
DRAWN DATE DESIGNED DATE CHECKED DATE REVIEWED DATE	POWER & LIGHTING PLAN SHT E2 OF

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

(1/E3)

3 BEDROOM

PANEL 'A' LOCATION GARAGE TYPE LOADCENTER
200 AMP 120/240 VOLT 1 PHASE 3 WIRE

CIR NO	BKR A.	BKR P.	FDG AWG	DESCRIPTION	LOAD A	LOAD B
1	20	1	12	BEDROOM, HALL LTS./PLUGS	900	
3	20	1	12	BEDROOM, HALL LTS./PLUGS		1320
5	20	1	12	BATHROOM LTS./PLUGS/FAN	700	
7	20	1	12	MSTR. BATHROOM LTS./PLUGS/FAN		700
9	20	1	12	LIVING ROOM LTS./PLUGS	1500	
11	20	1	12	UTILITY, DINING, KITCHEN LTS.		1650
13	20	1	12	GARAGE LTS./OUTDOOR LTS.	744	
15	20	1	12	GARAGE/EXTERIOR PLUGS		900
17	20	1	12	FURNACE	884	
19				SPACE		
21				SPACE		
23				SPACE		
2	20	1	12	KITCHEN PLUGS	1500	
4	20	1	12	KITCHEN PLUGS		1500
6	20	1	12	KITCHEN PLUGS	1500	
8	20	1	12	KITCHEN PLUGS		1450
10	20	1	12	KITCHEN PLUGS	1200	
12	20	1	12	WASHER PLUG		512
14	30	2	12	WATER HEATER	2250	
16				WATER HEATER		2250
18	40	2	8	DRYER PLUG	2500	
20				DRYER PLUG		2500
22	50	2	6	RANGE PLUG	2600	
24				RANGE PLUG		2600
MAIN BRKR 150A				TOTAL VA	16,256	15,382
TOTAL KVA 31.6				TOTAL AMPS	135.5	128.2

BOTTOM ☐ SURFACE ☐ S.NEUT ☒ FEEDER 2"C., 3# 3CU.
TOP ☒ FLUSH ☒ I.G.BUSS ☐ AIC SYM. 10,000

• GROUND FAULT INTERRUPTER BREAKER

(2/E3)

DUPLEX

PANEL 'A' LOCATION GARAGE TYPE LOADCENTER
200 AMP 120/240 VOLT 1 PHASE 3 WIRE

CIR NO	BKR A.	BKR P.	FDG AWG	DESCRIPTION	LOAD A	LOAD B
1	20	1	12	BEDROOM LTS./PLUGS	1380	
3	20	1	12	BATHROOM LTS./PLUGS/FAN		700
5	20	1	12	MAIN FLOOR LTS./PLUGS	660	
7	20	1	12	MAIN FLOOR LTS./PLUGS		1662
9	20	1	12	GARAGE LTS./OUTDOOR LTS.	544	
11	20	1	12	GARAGE/EXTERIOR PLUGS		900
13	20	1	12	FURNACE	884	
15				SPACE		
17				SPACE		
19				SPACE		
21				SPACE		
23				SPACE		
2	20	1	12	KITCHEN PLUGS	1500	
4	20	1	12	KITCHEN PLUGS		1500
6	20	1	12	KITCHEN PLUGS	1500	
8	20	1	12	KITCHEN PLUGS		1450
10	20	1	12	KITCHEN PLUGS	1200	
12	20	1	12	WASHER PLUG		512
14	30	2	12	WATER HEATER	2250	
16				WATER HEATER		2250
18	40	2	8	DRYER PLUG	2500	
20				DRYER PLUG		2500
22	50	2	6	RANGE PLUG	2600	
24				RANGE PLUG		2600
MAIN BRKR 150A				TOTAL VA	14,998	14,074
TOTAL KVA 29.1				TOTAL AMPS	125.0	117.3

BOTTOM ☐ SURFACE ☐ S.NEUT ☒ FEEDER 2"C., 3# 3CU.
TOP ☒ FLUSH ☒ I.G.BUSS ☐ AIC SYM. 10,000

• GROUND FAULT INTERRUPTER BREAKER

(3/E3)

DUPLEX

PANEL 'B' LOCATION GARAGE TYPE LOADCENTER
200 AMP 120/240 VOLT 1 PHASE 3 WIRE

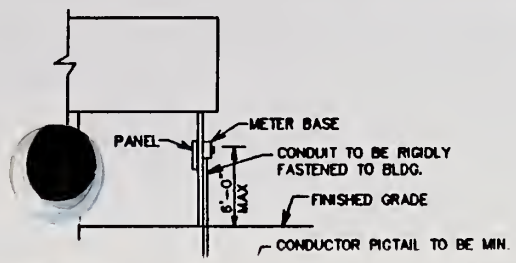
CIR NO	BKR A.	BKR P.	FDG AWG	DESCRIPTION	LOAD A	LOAD B
1	20		12	BEDROOM LTS./PLUGS	1380	
3	20		12	BATHROOM LTS./PLUGS/FAN		700
5	20		12	MAIN FLOOR LTS./PLUGS	660	
7	20		12	MAIN FLOOR LTS./PLUGS		1662
9	20		12	GARAGE LTS./OUTDOOR LTS.	544	
11	20		12	GARAGE/EXTERIOR PLUGS		900
13	20		12	FURNACE	884	
15				SPACE		
17				SPACE		
19				SPACE		
21				SPACE		
23				SPACE		
2	20		12	KITCHEN PLUGS	1500	
4	20		12	KITCHEN PLUGS		1500
6	20		12	KITCHEN PLUGS	1500	
8	20		12	KITCHEN PLUGS		1450
10	20		12	KITCHEN PLUGS	1200	
12	20		12	WASHER PLUG		512
14	30	2	12	WATER HEATER	2250	
16				WATER HEATER		2250
18	40	2	8	DRYER PLUG	2500	
20				DRYER PLUG		2500
22	50	2	6	RANGE PLUG	2600	
24				RANGE PLUG		2600
MAIN BRKR 150A				TOTAL VA	14,998	14,074
TOTAL KVA 29.1				TOTAL AMPS	125.0	117.3

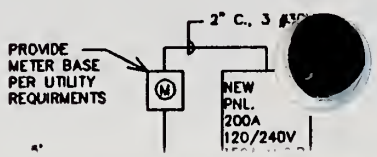
BOTTOM ☐ SURFACE ☐ S.NEUT ☒ FEEDER 2"C., 3# 3CU.
TOP ☒ FLUSH ☒ I.G.BUSS ☐ AIC SYM. 10,000

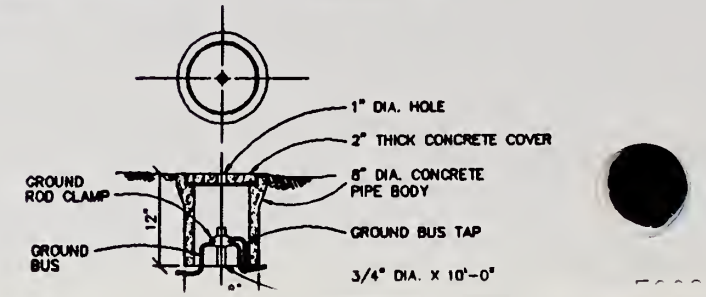
• GROUND FAULT INTERRUPTER BREAKER

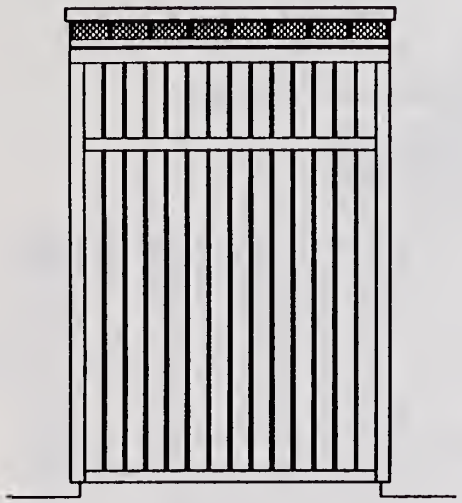
SYMBOL LIST

- FLUORESCENT FIXTURE
- INCANDESCENT FIXTURE, CEILING MOUNTED
- INCANDESCENT FIXTURE, WALL MOUNTED
- INCANDESCENT FIXTURE, TRACK MOUNTED
- DUPLEX RECEPTACLE
- DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER, +48" U.O.N.
- DUPLEX RECEPTACLE, SPLIT WIRED
- SIMPLEX SPECIAL PURPOSE OUTLET
- TELEPHONE OUTLET, WALL MOUNTED
- TELEVISION OUTLET, WALL MOUNTED
- WALL SWITCH – ONE WAY
- WALL SWITCH – THREE WAY
- DIMMER SWITCH, 600 WATT
- SMOKE DETECTOR
- INFRA-RED RADIANT HEATER AND VENT FAN
- JUNCTION BOX
- DISCONNECT SWITCH
- EQUIPMENT CONNECTION
- WP WEATHERPROOF
- GFI GROUND FAULT INTERRUPTER
- U.O.N. UNLESS OTHERWISE NOTED
- METER AND BASE
- ELECTRICAL PANEL



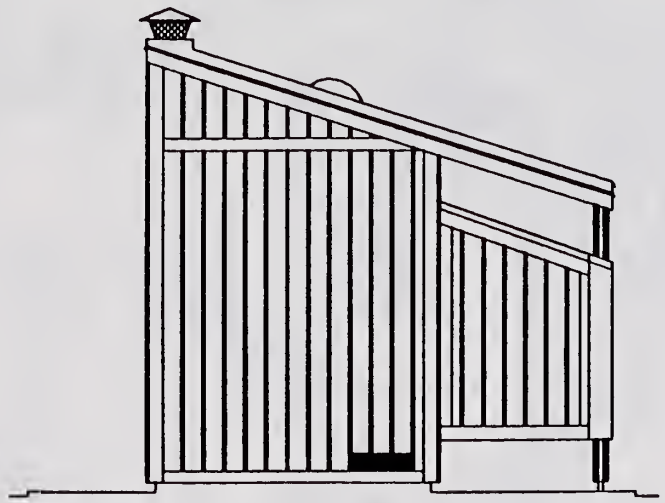






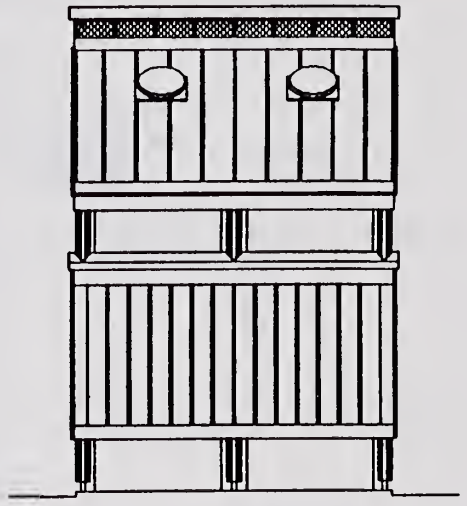
SOUTH ELEVATION

NO SCALE



EAST ELEVATION

NO SCALE



NORTH ELEVATION

NO SCALE

NOTE:
FOR A COMPLETE DESCRIPTION OF MATERIAL AND FINISHES, SEE SPEC'S. ANY MISCELLANEOUS FEATURES ATTACHED TO BUILDING SHALL BE PAINTED BY THE APPPROPRIATE PAINT SYSTEM TO MATCH SURROUNDING SURFACE.

FINISH SCHEDULE

ITEM	MATERIAL	PAINT SYSTEM	COLOR REMARKS
SIDING	ROUGH-SAWN PLYWOOD	OLYMPIC SOLID COLOR-OR EQUAL	OXFORD BEN-SOUTH SIDE ONLY N-E & W. SIDES
ROOFING & SKYLIGHT FRAME	GALV. STEEL	FACTORY FINISH	ROMAN BRONZE FACTORY APPLIED
FACIA AND TRIM HOLLOW METAL DOOR FRAMES	WOOD HOLLOW METAL	OLYMPIC SOLID COLOR-OR EQUAL	
VENT CAP AND FLASHING	GALV. STEEL	SEMI GLOSS ENAMEL	AS APPROPRIATE TO MATCH ROOFING
VENTS IN WALL	VARIES		MATCH SIDING
DOORS & DOORVENTS	HOLLOW METAL		AS APPROPRIATE TO MATCH TRIM
LINER	FIBERGLASS	FACTORY FINISH	WHITE FACTORY APPLIED

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A0000600
DEC. 22,1986

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

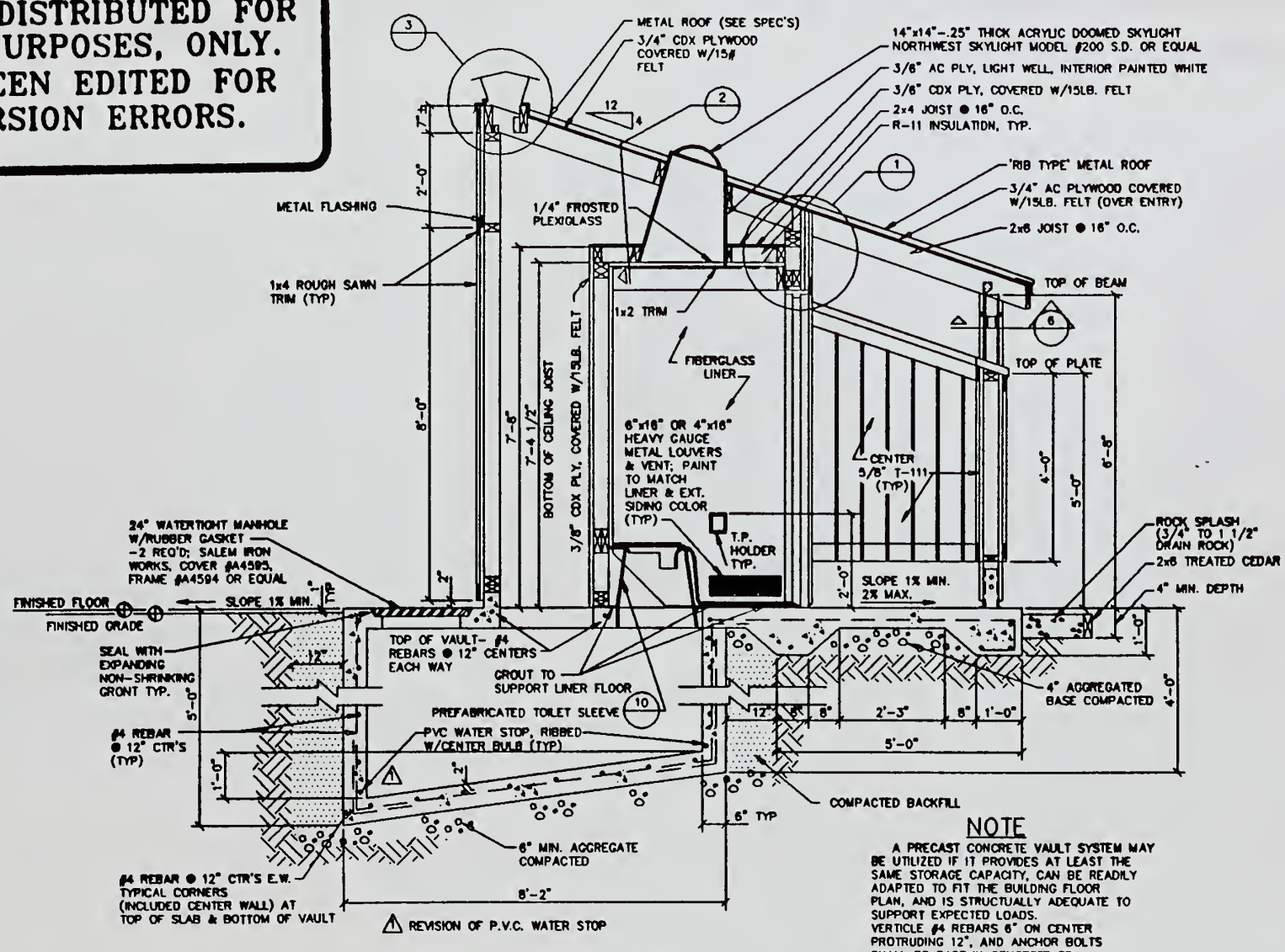
THE PACIFIC NORTHWEST REGION

STANDARD VAULT TOILET

DRAWN ____ DATE ____
DESIGNED ____ DATE ____
CHECKED ____ DATE ____
APPROVED ____ DATE ____

SHT. 1

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SECTION A-A

SCALE: 3/4"=1'-0"

NOTE

A PRECAST CONCRETE VAULT SYSTEM MAY BE UTILIZED IF IT PROVIDES AT LEAST THE SAME STORAGE CAPACITY, CAN BE READILY ADAPTED TO FIT THE BUILDING FLOOR PLAN, AND IS STRUCTUALLY ADEQUATE TO SUPPORT EXPECTED LOADS. VERTICLE #4 REBARS 6" ON CENTER PROTRUDING 12", AND ANCHOR BOLTS SHALL BE CAST IN CONCRETE TO SECURE STEM WALL TO TOP OF VAULT.

A0000601

DEC 24,1986

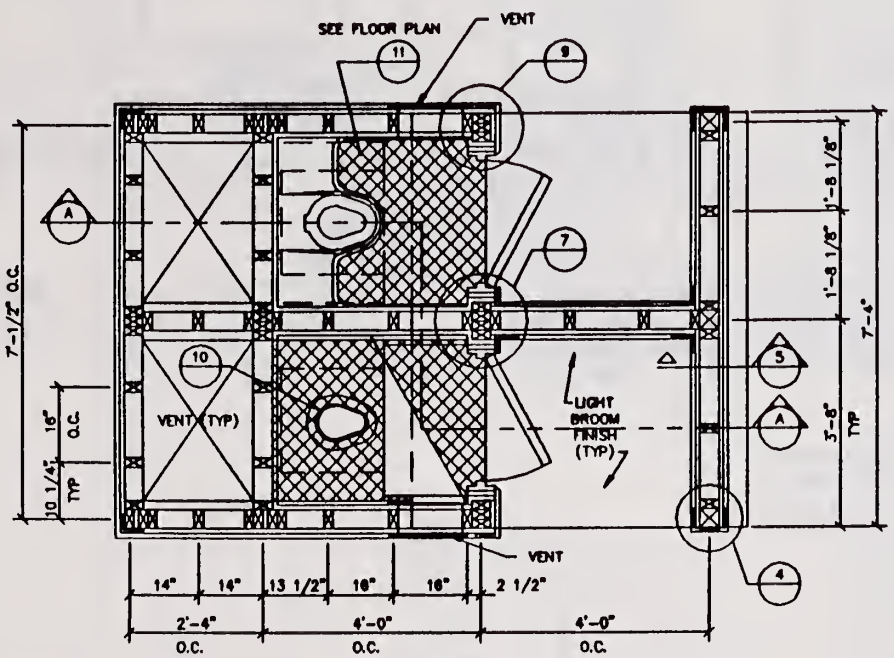
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

STANDARD VAULT TOILET

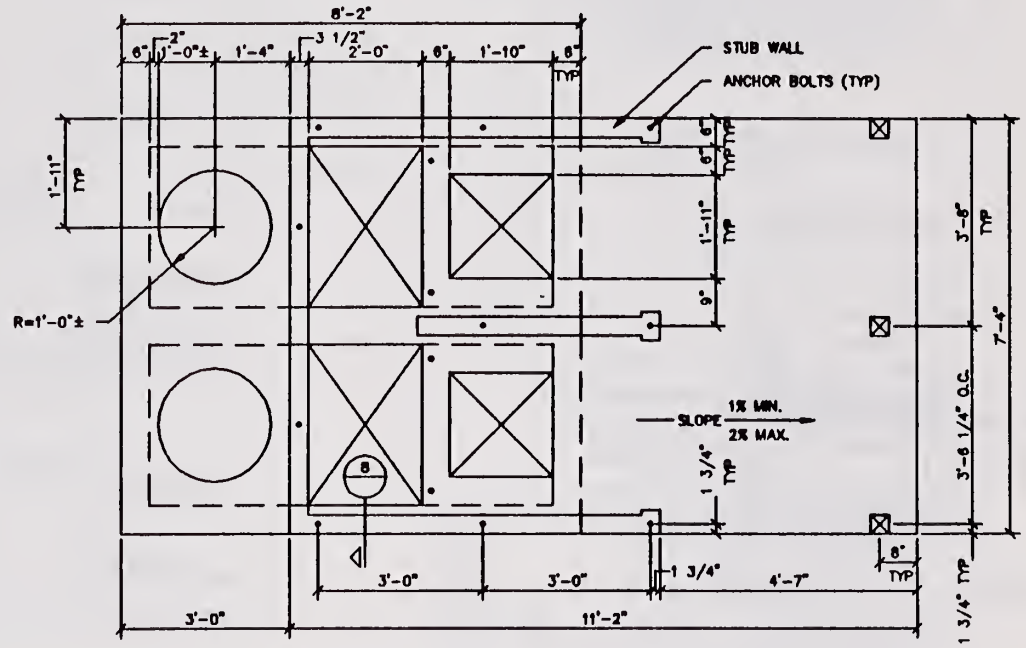
DRAWN ____ DATE ____
DESIGNED ____ DATE ____
CHECKED ____ DATE ____
REVIEWED ____ DATE ____

SHT. 3
OF 6



NOTE:
ALL CONCEALED WOOD SURFACES SHALL HAVE ONE COAT OF "THOMPSONS WATER SEAL" OR APPROVED EQUAL

FLOOR PLAN
SCALE: 3/4"=1'-0"



VAULT AND SLAB PLAN
SCALE: 3/4"=1'-0"

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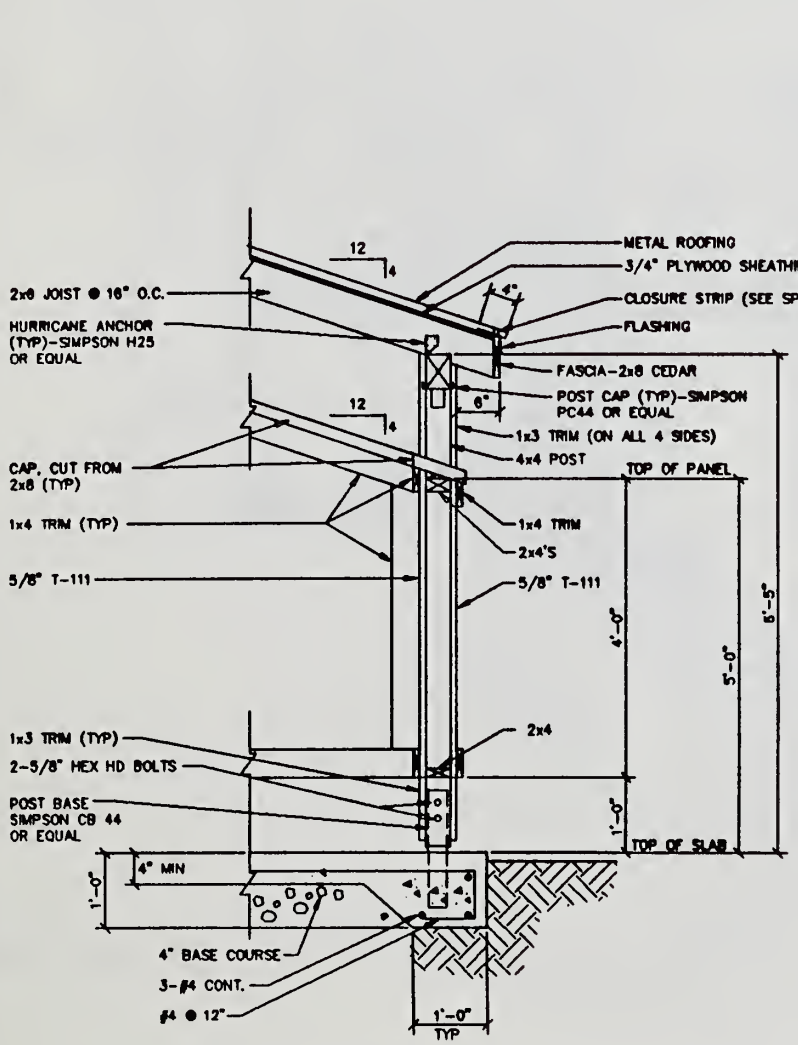
A0000602
DEC 24,1986

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

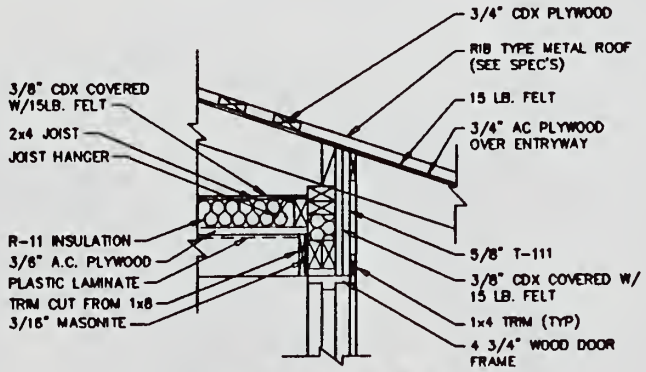
STANDARD VAULT TOILET

DRAWN ____ DATE ____
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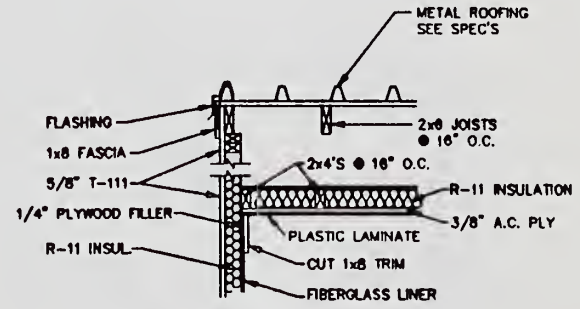
SHT. 2



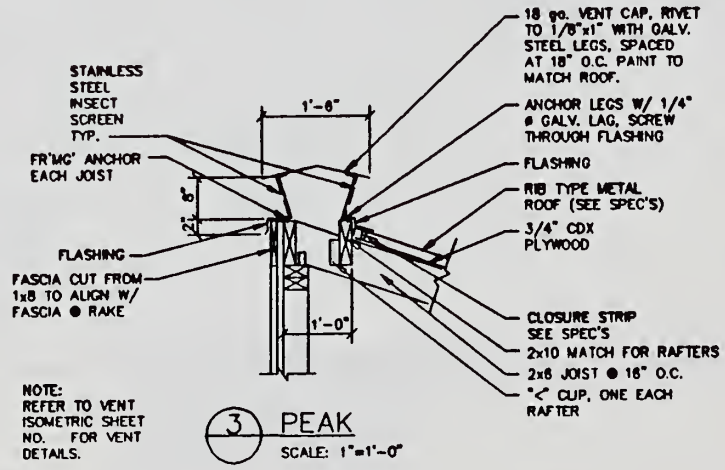
5 SCREEN WALL
SCALE: 1"=1'-0"



1 HEADER DETAIL
● DOOR SCALE: 1 1/2"=1'-0"



2 RAKE DETAIL
SCALE: 1"=1'-0"



NOTE:
REFER TO VENT ISOMETRIC SHEET NO. FOR VENT DETAILS.

3 PEAK
SCALE: 1"=1'-0"

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A0000700
DEC 24,1986

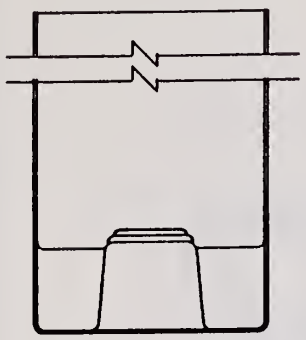
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THE PACIFIC NORTHWEST REGION

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CHECKED ____ DATE ____
REVIEWED ____ DATE ____

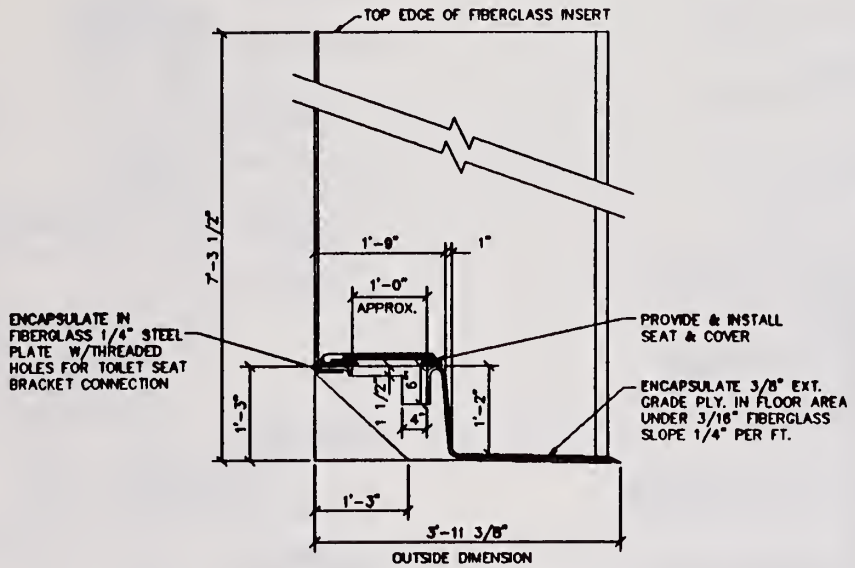
STANDARD VAULT TOILET

SHT. 5
OF 6

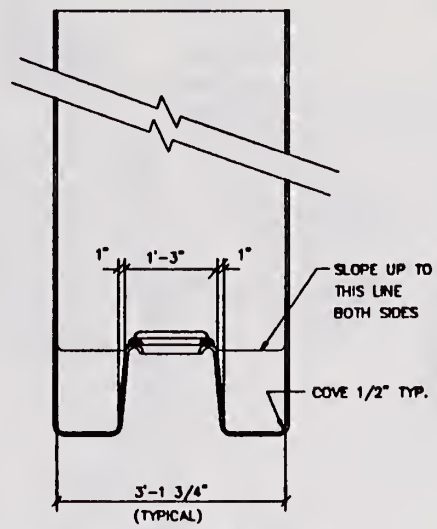
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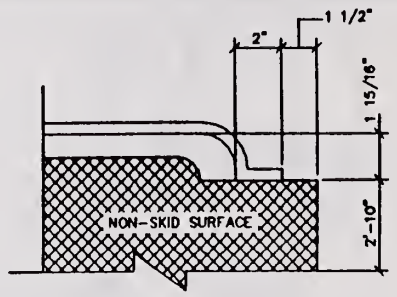
A SECTION A–A
SCALE: 1"=1'-0"



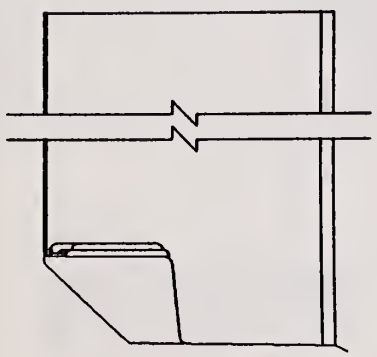
C SECTION C–C
SCALE: 1"=1'-0"



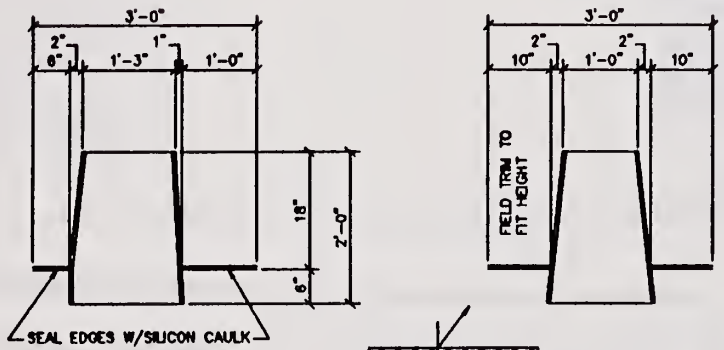
D SECTION D–D
SCALE: 1"=1'-0"



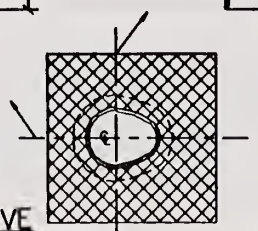
E CORNER DETAIL
NO SCALE



B SECTION B–B
SCALE: 1"=1'-0"



10 PREFAB. TOILET SLEEVE
SCALE: VARIES

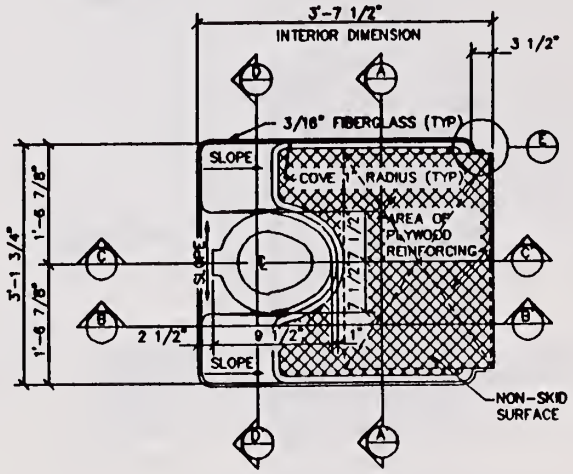


PLAN
SCALE: 3/4"=1'-0"

NOTE

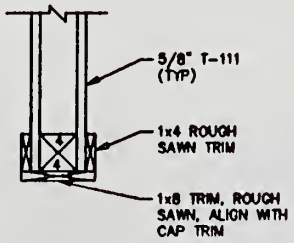
FIBERGLASS LINERS CAN BE OBTAINED FROM:
– ATTBAR PLASTIC
6205 N.E. 63RD. STREET
VANCOUVER, WASHINGTON 97661
– REIFF FIBERGLASS
RT, 4 BOX, 183
WALLA WALLA, WASHINGTON
99362 OR EQUAL.

A0000701
DEC. 31,1986

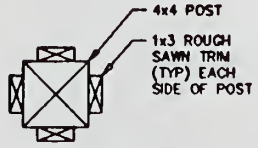


11 FLOOR PLAN
SCALE: 1"=1'-0"

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE THE PACIFIC NORTHWEST REGION	STANDARD VAULT TOILET
DRAWN DATE DESIGNED DATE CHECKED DATE	SHT. 4

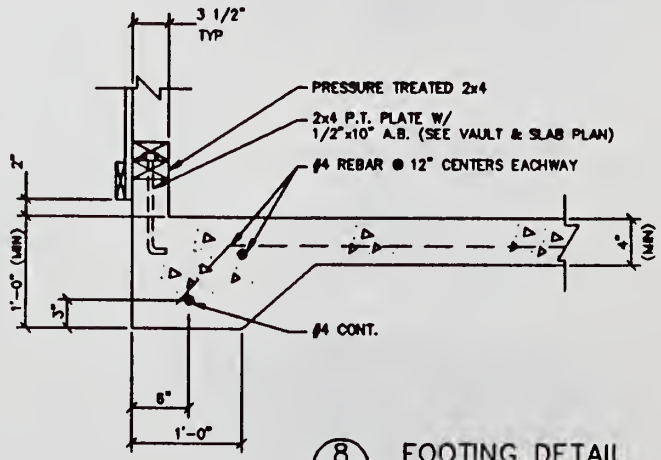


4 TRIM DETAIL
SCALE: 1 1/2"=1'-0"

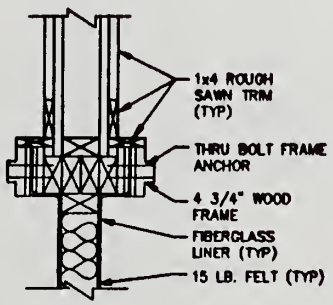


SECTION ● SCREEN POST

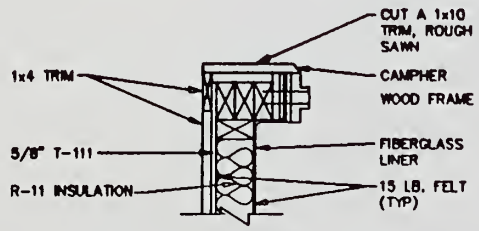
6 PLAN DETAIL (TYP)
SCALE: 3"=1'-0"



8 FOOTING DETAIL
SCALE: 1 1/2"=1'-0"



7 WALL INTERSECT
SCALE: 1 1/2"=1'-0"



9 TRIM DETAIL
SCALE: 1 1/2"=1'-0"

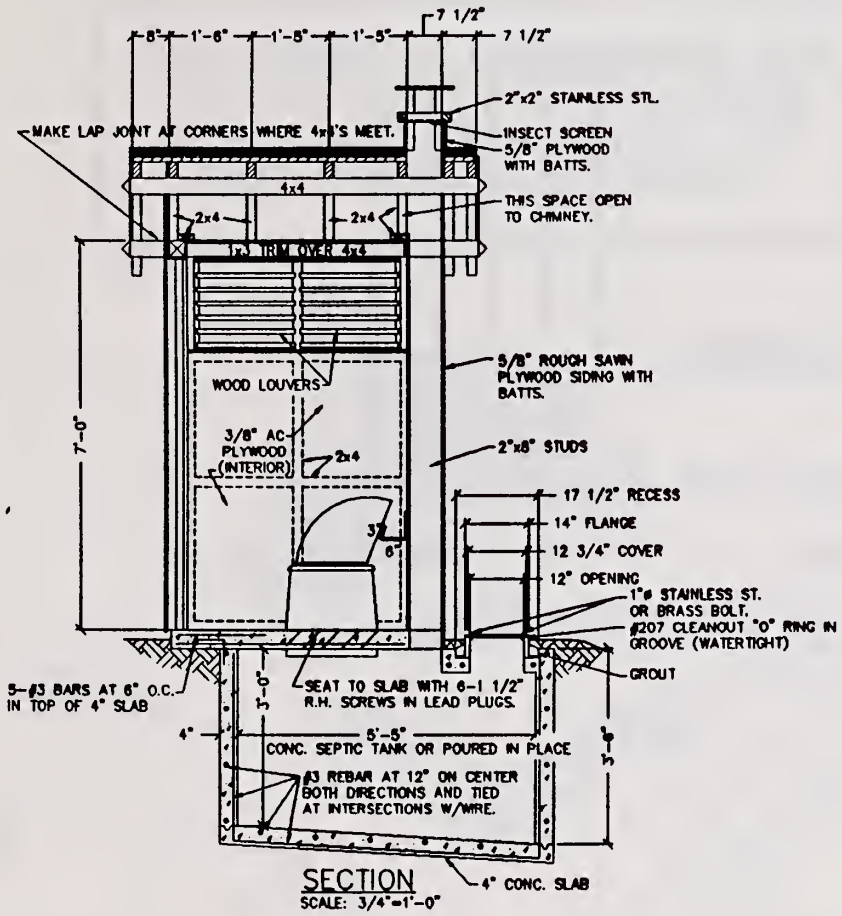
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A0000702
DEC 24,1986

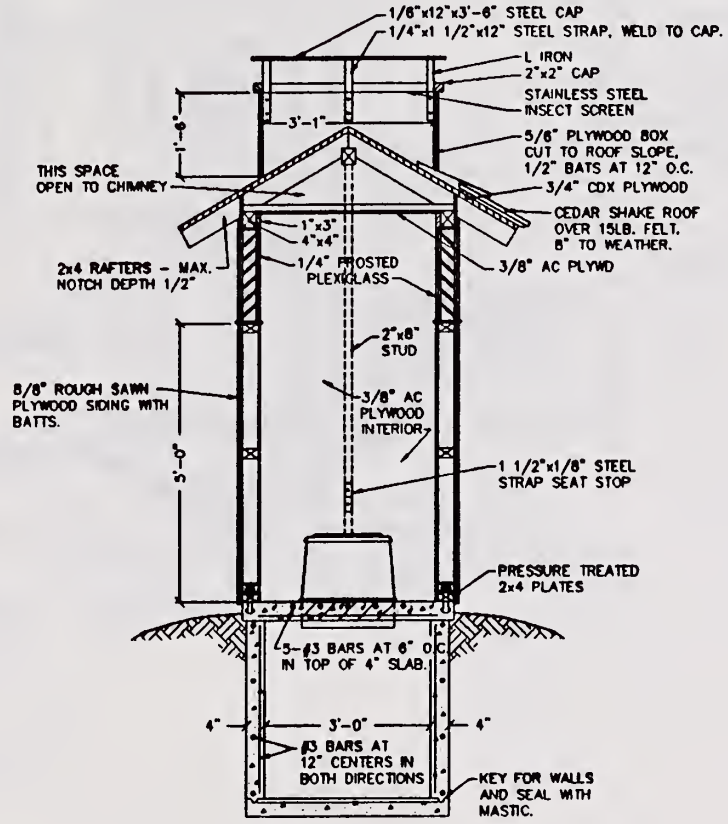
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

STANDARD VAULT TOILET

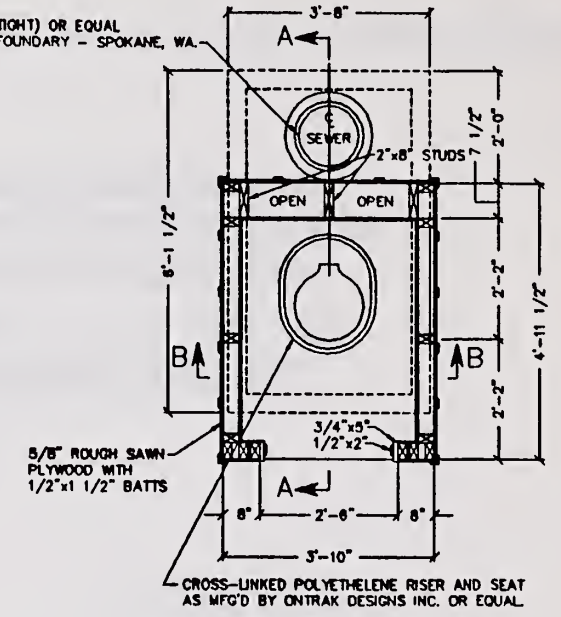
DRAWN	DATE	
DESIGNED	DATE	SHT. 6
CHECKED	DATE	OF 6
REVIEWED	DATE	



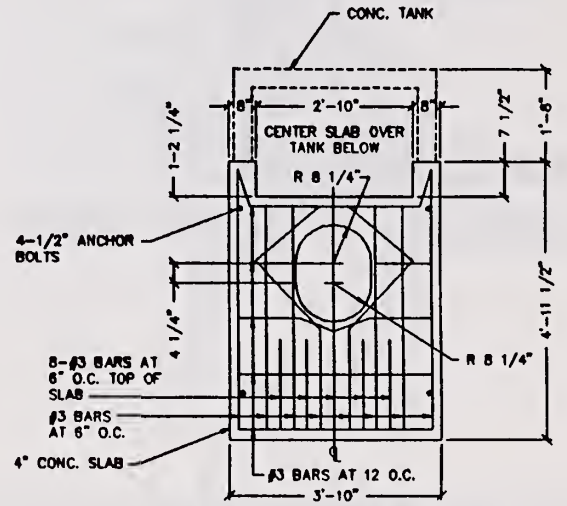
SECTION
SCALE: 3/4"=1'-0"



SECTION
SCALE: 3/4"=1'-0"



FLOOR PLAN
SCALE: 3/4"=1'-0"



CONCRETE FLOOR SLAB
PRECAST OR POUR IN PLACE
SCALE: 3/4"=1'-0"

NOTES:

1. A PRECAST CONCRETE VAULT SYSTEM MAY BE UTILIZED IF IT PROVIDES AT LEAST THE SAME STORAGE CAPACITY, CAN BE READILY ADAPTED TO FIT THE BUILDING FLOOR PLAN, AND IS STRUCTUALLY ADEQUATE TO SUPPORT EXPECTED LOADS.

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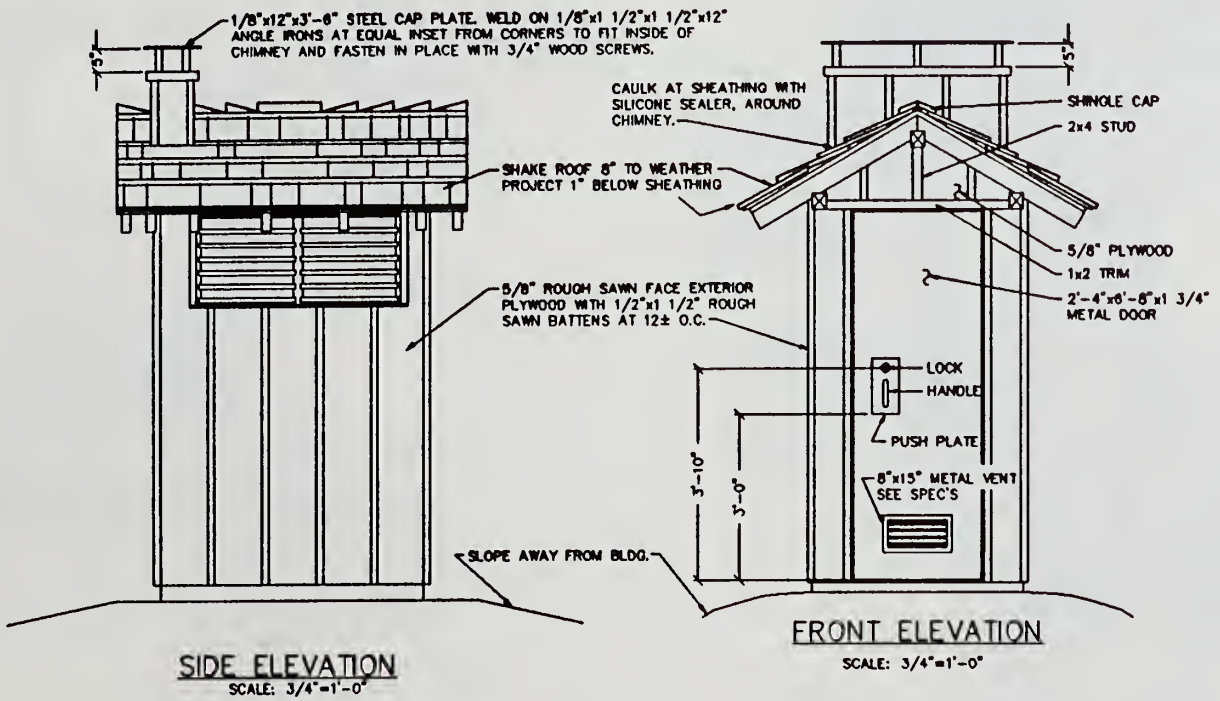
A0000800
MAY 7,1967

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THE PACIFIC NORTHWEST REGION

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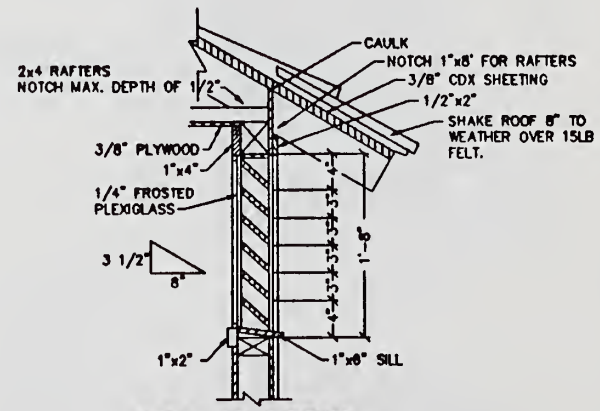
WOOD 1 UNIT VAULT TOILET

SHT. 1
OF 2



SIDE ELEVATION
SCALE: 3/4"=1'-0"

FRONT ELEVATION
SCALE: 3/4"=1'-0"



LOUVER DETAIL
SCALE: 1 1/2"=1'-0"

NOTES:

1. STAIN EXTERIOR WITH 2 COATS - SOLID COLOR STAIN OLYMPIC OR EQUAL. SIDING = CHOCOLATE. TRIM AND DOORS = BUTTERNUT - VENT = SAME AS DOORS.
2. PAINT INTERIOR WITH 2 COATS, SEMI-GLOSS, EXTERIOR WHITE PAINT.
3. PAINT DOOR, BOTH SIDES, WITH 2 COATS, SEMI-GLOSS EXTERIOR PAINT, BROWN COLOR SIMILAR TO STAIN COLOR.
4. CAULK AROUND BASE OF CHIMNEY BOX AT ROOF SHEATHING AND AROUND INSIDE OF BLDG AT FLOOR WITH SILICONE SEALER.
5. LOCATE BUILDING ON SUNNY SITE WITH BACK SIDE TOWARDS THE SOUTH FOR BEST RESULTS.

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A0000801
MAY 8,1987

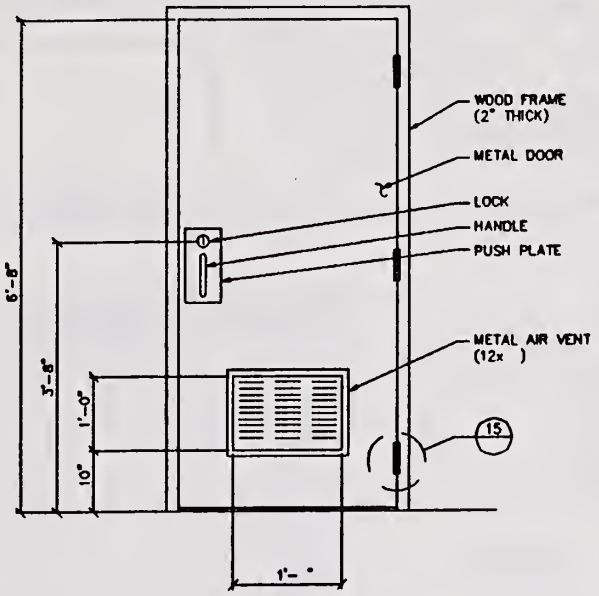
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

DRAWN ____ DATE ____
DESIGNED ____ DATE ____
CHECKED ____ DATE ____
REVIEWED ____ DATE ____

WOOD 1 UNIT
VAULT TOILET

SHT. 2
OF 2

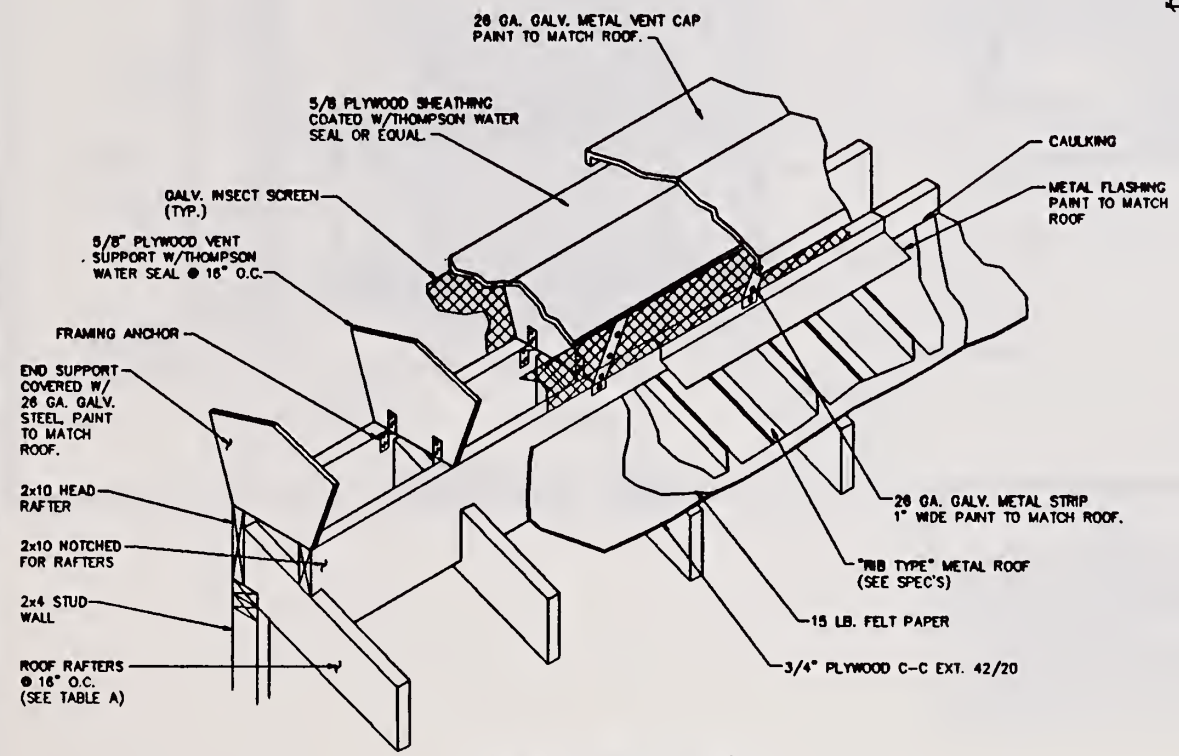
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SEE SPECIFICATIONS

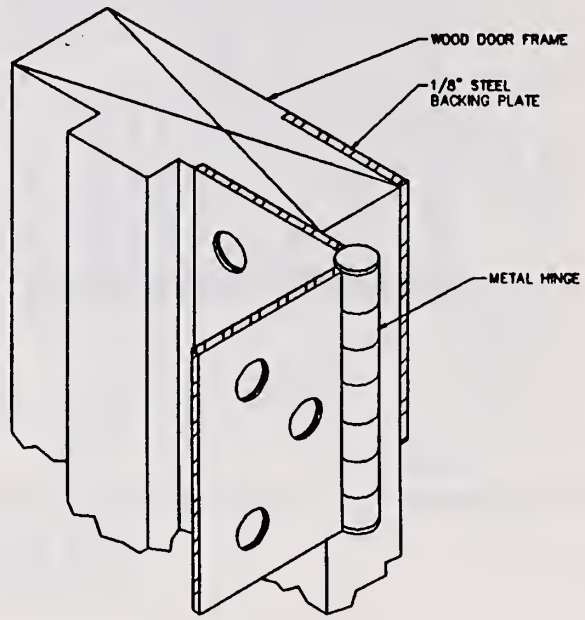
DOOR DETAIL 14

SCALE: 1"=1'-0"



VENT ISOMETRIC 16

NO SCALE



HINGE DETAIL 15

SCALE: 1/2"=1'-0"

A0000900
JAN. 27,1987

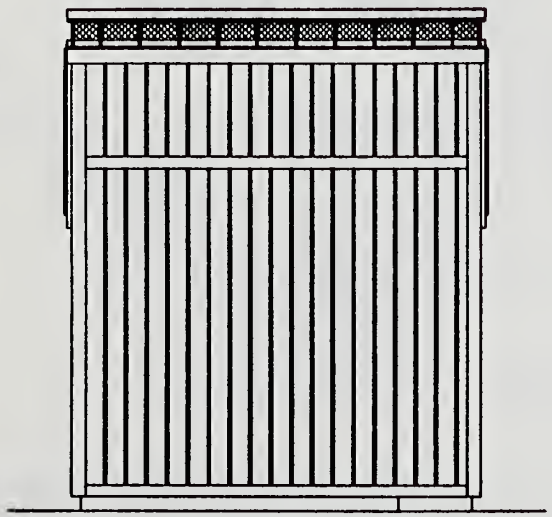
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FOREST SERVICE

THE PACIFIC NORTHWEST REGION

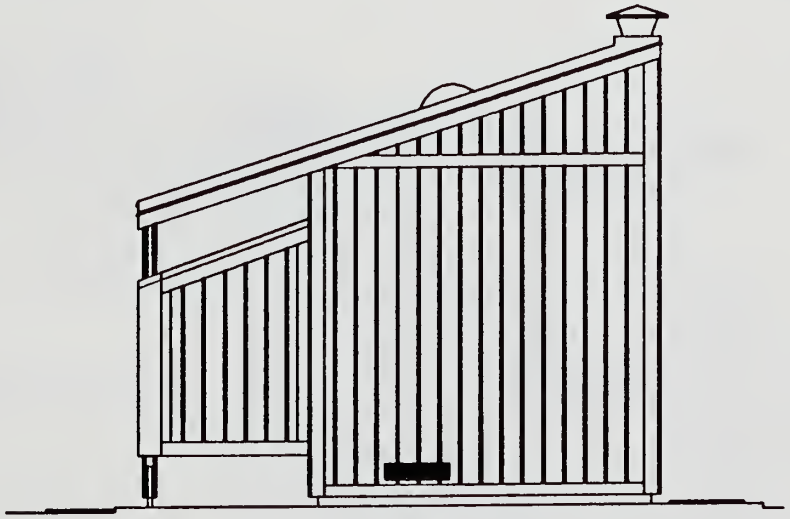
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CHECKED ____ DATE ____
REVIEWED ____ DATE ____

DOUBLE VAULT HANDICAP TOILET

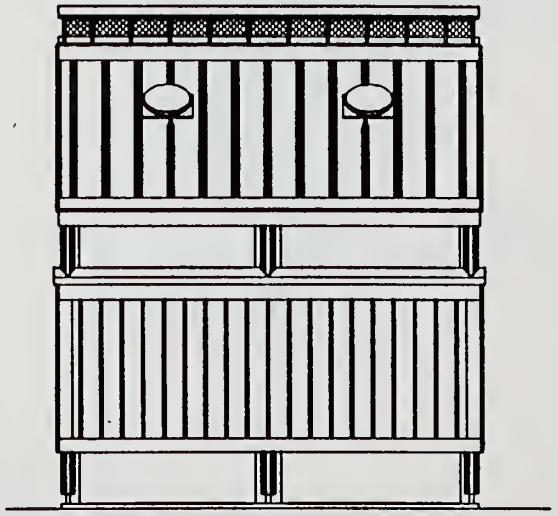
SHT. 7
OF 7



SOUTH ELEVATION
NO SCALE



EAST ELEVATION
NO SCALE



NORTH ELEVATION
NO SCALE

FINISH SCHEDULE							
ITEM	EXTERIOR SIDING & VENTS	ROOFING	FASCIA, TRIM & DOOR FRAMES	VENT CAP & FLASHING	INTERIOR CEILING/TRIM	DOORS & VENTS	LINER
MATERIAL	ROUGH SAWN PLYWOOD/METAL	GALV. STEEL	WOOD	GALV. STEEL	WOOD	HOLLOW METAL	FIBERGLASS
PAINT SYS.	OLYMPIC (OR EQUAL) SOLID COLOR STAIN	FACTORY FINISH	OLYMPIC (OR EQUAL) SOLID COLOR STAIN	AS APPROP.	AS APPROP.	AS APPROP.	-
COLOR	(1) OXFORD BRN. (2) BUTTERNUT	ROMAN BRONZE	BEIGE GRAY	TO MATCH ROOFING	WHITE	MATCH TRIM	WHITE
REMARKS	(1) ● SOUTH WALL (2) ALL OTHER WALLS	FACTORY APPLIED		"Z" FLASHING TO MATCH SIDING	GLOSS ENAMEL	GLOSS ENAMEL	FACTORY FINISH

NOTE: FOR A COMPLETE DESCRIPTION OF MATERIALS & FINISHES SEE SPEC. ANY MISCELLANEOUS FEATURES ATTACHED TO BUILDING SHALL BE PAINTED WITH THE APPROPRIATE PAINT SYSTEM TO MATCH THE SURROUNDING SURFACE.

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A0001000
DEC. 31,1986

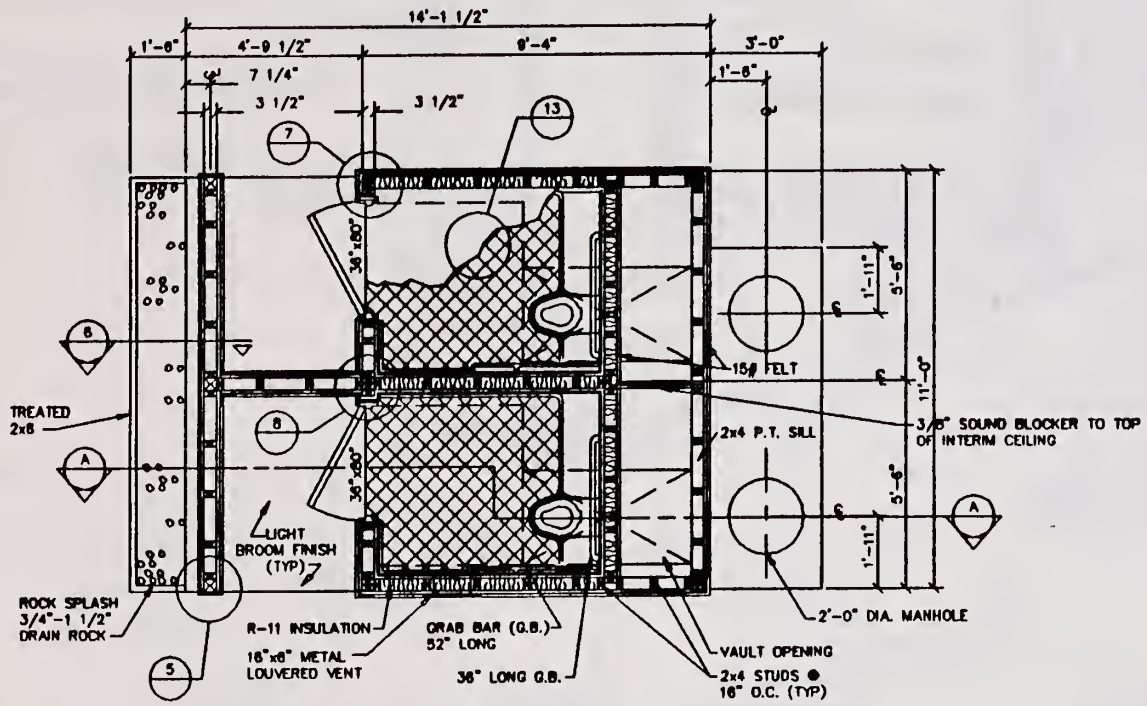
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

DOUBLE VAULT HANDICAP TOILET

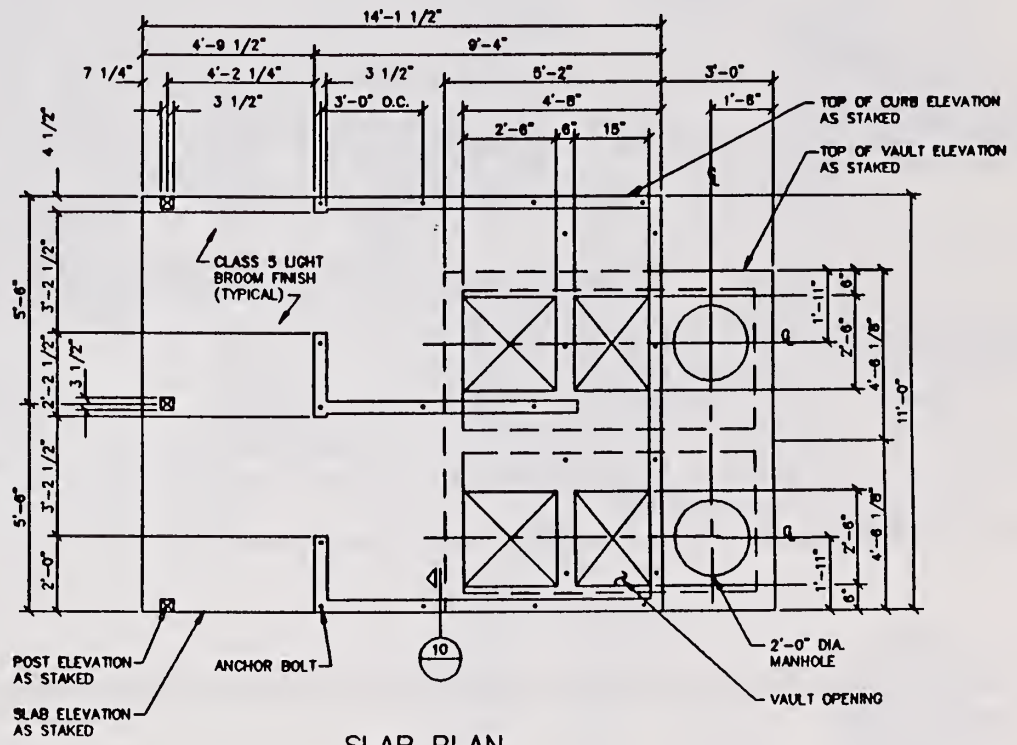
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REVIEWED ____ DATE ____

SHT. 1
OF 3

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FLOOR PLAN
SCALE: 1/2"=1'-0"



SLAB PLAN
SCALE: 1/2"=1'-0"

NOTE

A PRECAST CONCRETE VAULT SYSTEM MAY BE UTILIZED IF IT PROVIDES AT LEAST THE SAME STORAGE CAPACITY, CAN BE READILY ADAPTED TO FIT THE BUILDING FLOOR PLAN, AND IS STRUCTUALLY ADEQUATE TO SUPPORT EXPECTED LOADS.

VERTICLE #4 REBARS ON 6" CENTERS PROTRUDING 12", AND ANCHOR BOLTS SHALL BE CAST IN CONCRETE TO SECURE STEM WALL TO TOP OF VAULT.

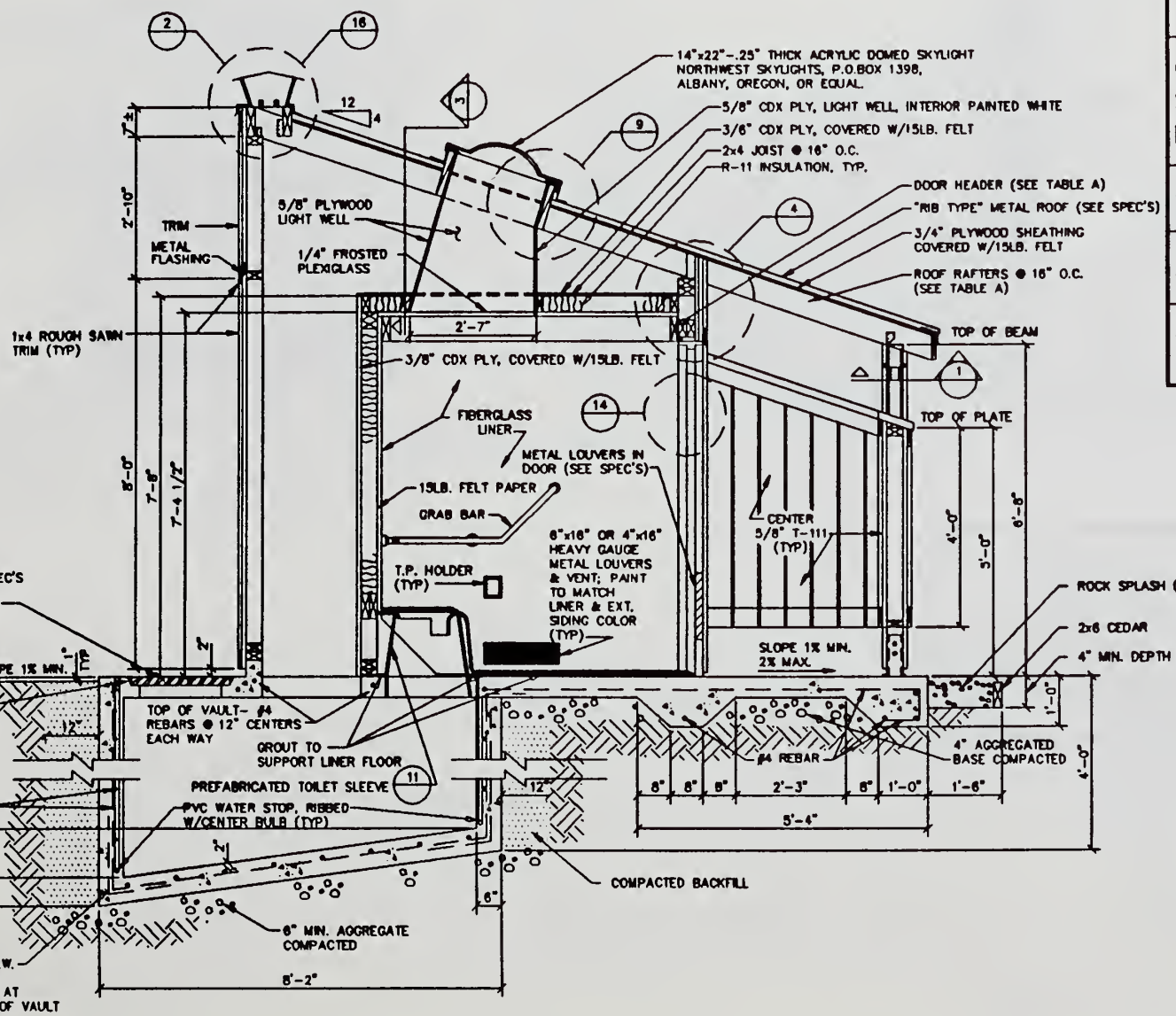
A0001100
JAN 2,1987

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

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DOUBLE VAULT HANDICAP TOILET

SHT. 2



SECTION A-A
SCALE: 3/4"=1'-0"

TABLE A			
GROUND SNOW LOAD	ROOF RAFTER	DOOR HEADER	PRIVACY SCREEN BEAM
100 P.S.F.	D.F. NO.2 2x10 @ 16" O.C.	D.F. NO.2 4x6	D.F. NO.2 4x6
250 P.S.F.	D.F. NO.2 4x10 @ 16" O.C.	D.F. NO.2 4x10	D.F. NO.2 4x10
400 P.S.F.	GLULAM 3 1/8"x10 1/2" @ 16" O.C.	GLULAM 3 1/8"x10 1/2" CONTINUOUS	GLULAM 3 1/8"X10 1/2" ARCH. APP. GRADE EXT. Fb=1600PSI, Fv=165PSI, Fc⊥=450PSI BOTH FACES, E=1.6x10⁶ PSI

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A0001101
JAN 6,1987

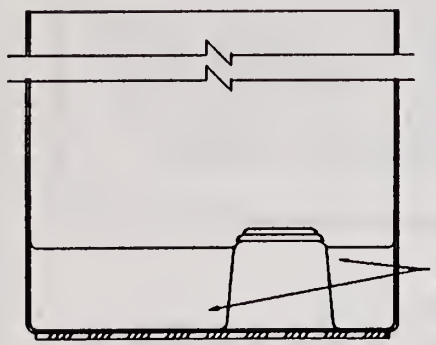
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

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DESIGNED ____ DATE ____
CHECKED ____ DATE ____
REVIEWED ____ DATE ____

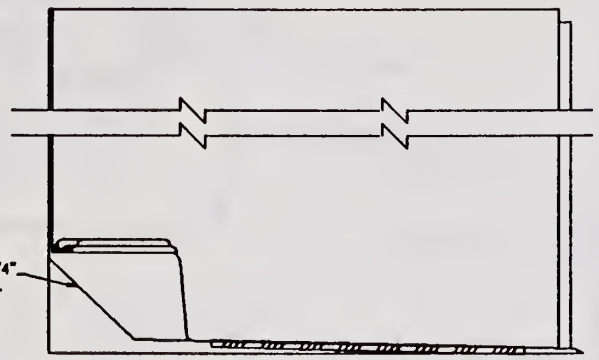
DOUBLE VAULT HANDICAP TOILET

SHT. 3
OF 4

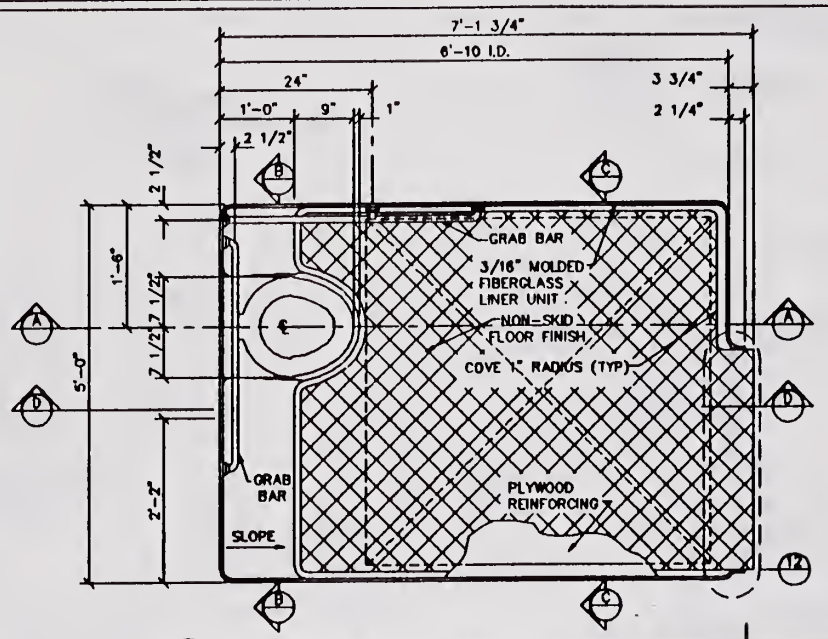
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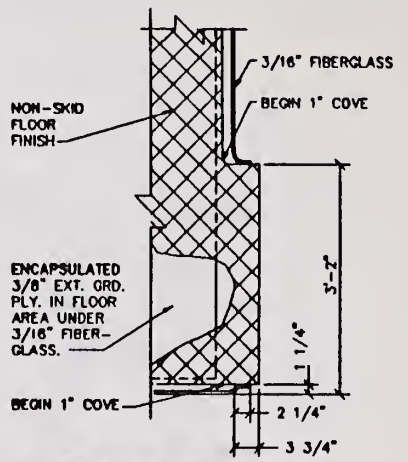
SECTION C–C
SCALE: 1"=1'-0"



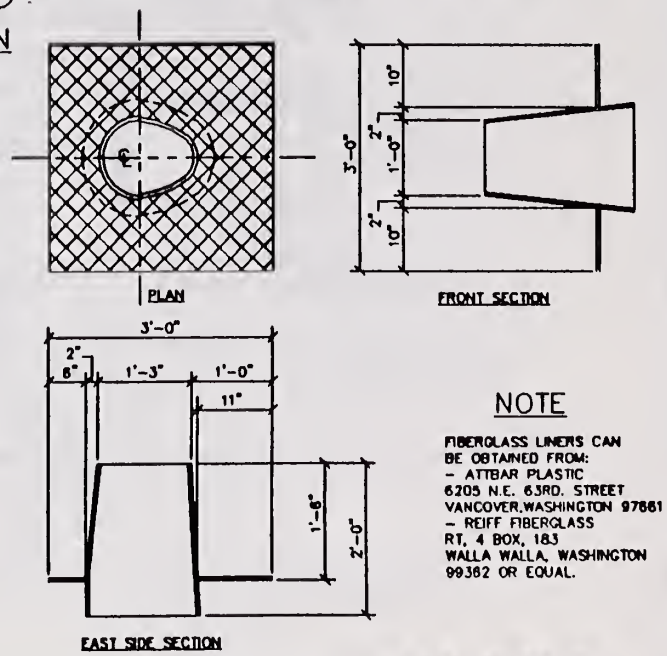
SECTION D–D
SCALE: 1"=1'-0"

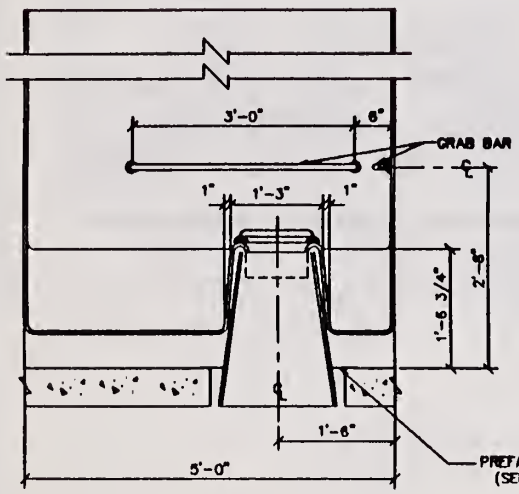


13 HANDICAPPED UNIT, PLAN
SCALE: 1"=1'-0"

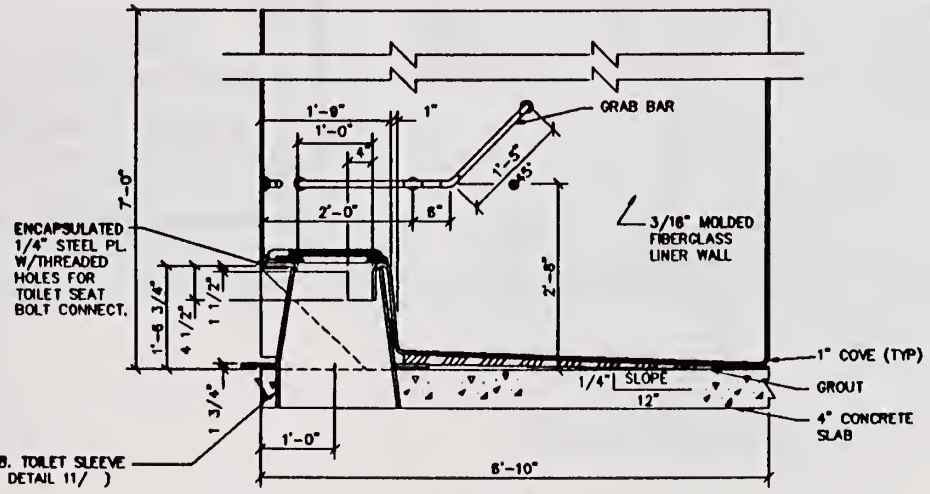


12 JAMB DETAIL
SCALE: 1"=1'-0"





SECTION B–B
SCALE: 1"=1'-0"



SECTION A–A
SCALE: 1"=1'-0"

NOTE

FIBERGLASS LINERS CAN BE OBTAINED FROM:
– ATTBAR PLASTIC
6205 N.E. 63RD. STREET
VANCOVER, WASHINGTON 97661
– REIFF FIBERGLASS
RT, 4 BOX, 183
WALLA WALLA, WASHINGTON
99362 OR EQUAL.

11 PREFAB. TOILET SLEEVE
SCALE: 1"=1'-0"

A0001200
JAN 6,1987

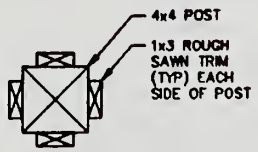
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

DOUBLE VAULT HANDICAP TOILET

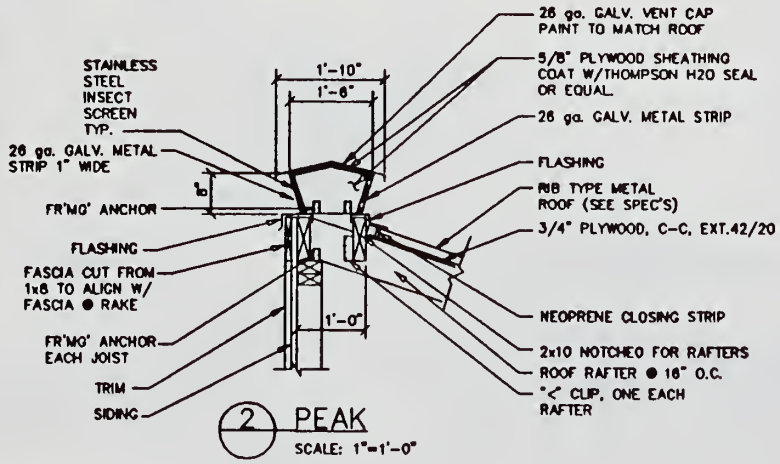
DRAWN ——— DATE
DESIGNED ——— DATE
CHECKED ——— DATE

SHT. 4

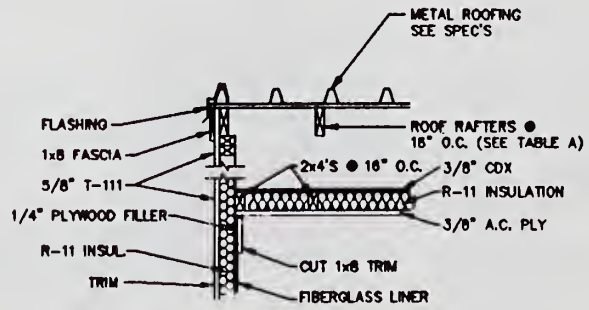
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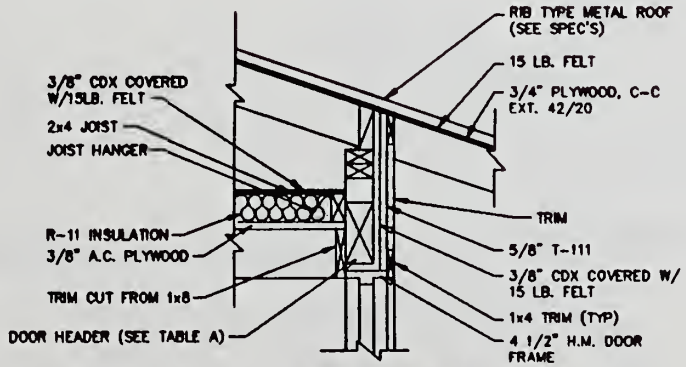
1 SCREEN POST
SCALE: 3"=1'-0"



2 PEAK
SCALE: 1"=1'-0"



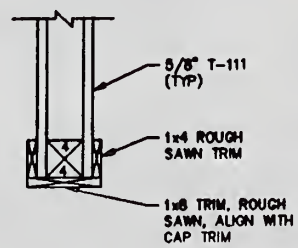
3 RAKE DETAIL
SCALE: 1"=1'-0"



4 HEADER DETAIL
● DOOR SCALE: 1 1/2"=1'-0"

NOTE

ALL CONCEALED WOOD SURFACES SHALL HAVE ONE COAT OF "THOMPSONS WATER SEAL" OR EQUAL.



5 TRIM DETAIL
SCALE: 1 1/2"=1'-0"

A0001201

JAN 7,1987

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

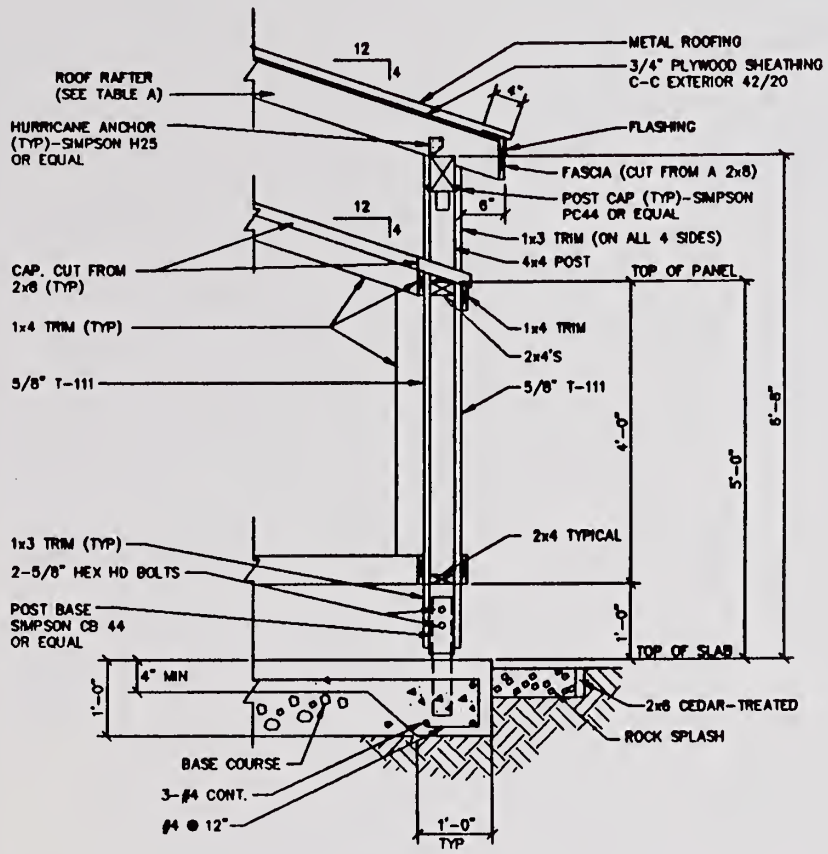
THE PACIFIC NORTHWEST REGION

DRAWN ____ DATE ____
DESIGNED ____ DATE ____
CHECKED ____ DATE ____
REVIEWED ____ DATE ____

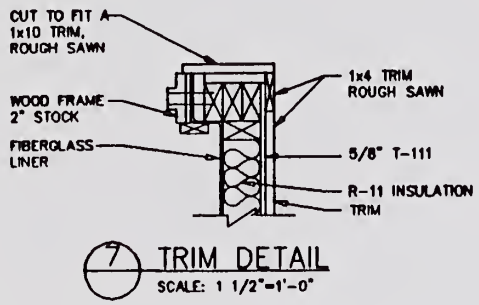
DOUBLE VAULT HANDICAP TOILET

SHT. 6
OF 7

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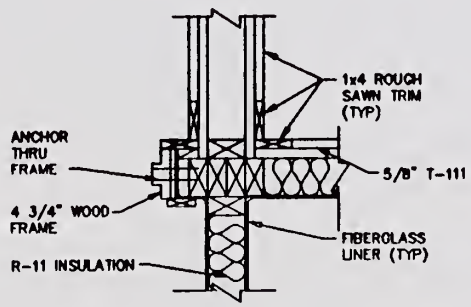
6 SCREEN WALL
SCALE: 1"=1'-0"



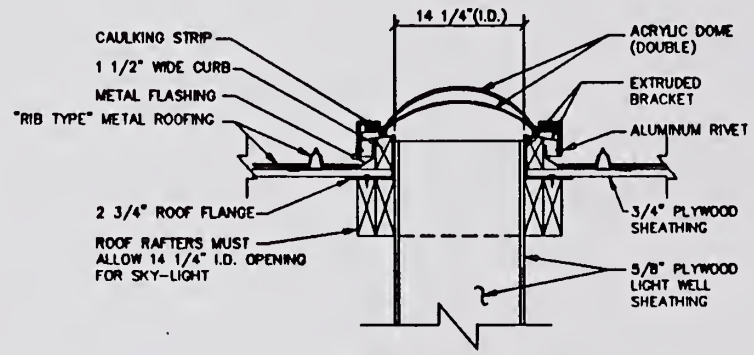
7 TRIM DETAIL
SCALE: 1 1/2"=1'-0"

NOTE

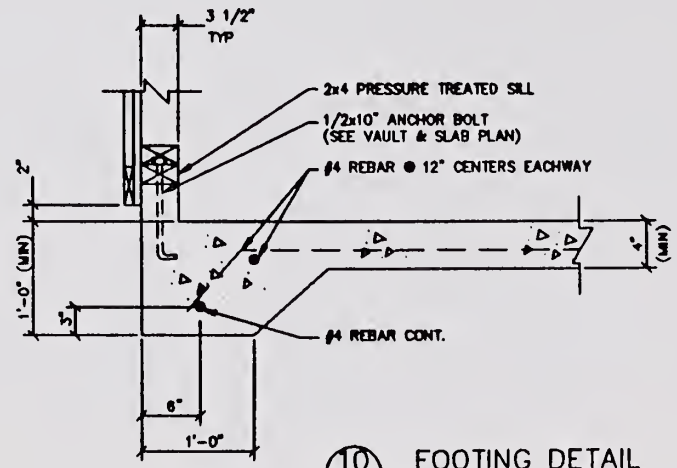
ALL CONCEALED WOOD SURFACES SHALL HAVE ONE COAT OF "THOMPSONS WATER SEAL" OR EQUAL.



8 WALL INTERSECT
SCALE: 1 1/2"=1'-0"



9 SKYLIGHT DETAIL
SCALE: 1"=1'-0"



10 FOOTING DETAIL
SCALE: 1 1/2"=1'-0"

A0001202

JAN 8,1987

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION
DRAWN ____ DATE

DOUBLE VAULT HANDICAP TIOLET

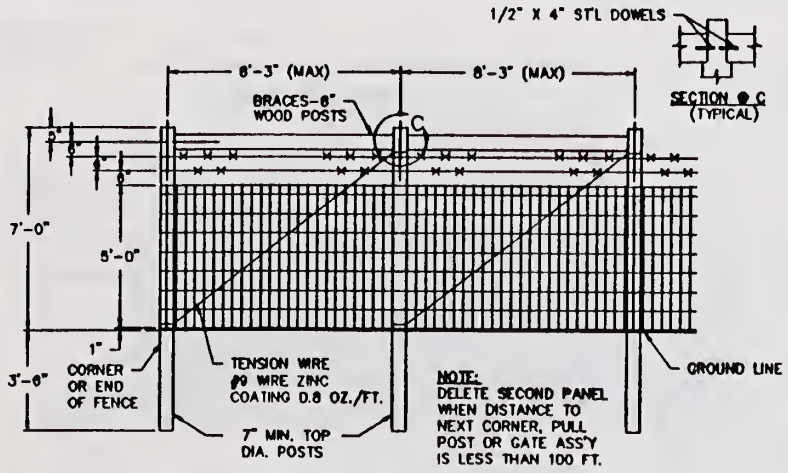
THE PACIFIC NORTHWEST REGION

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DESIGNED		DATE
CHECKED		DATE
REVIEWED		DATE

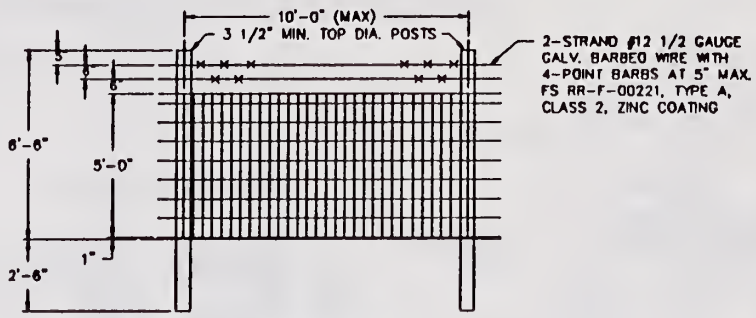
3-0" WOVEN W
WITH WOOD PO
STANDARD DETA

SHT 1
OF

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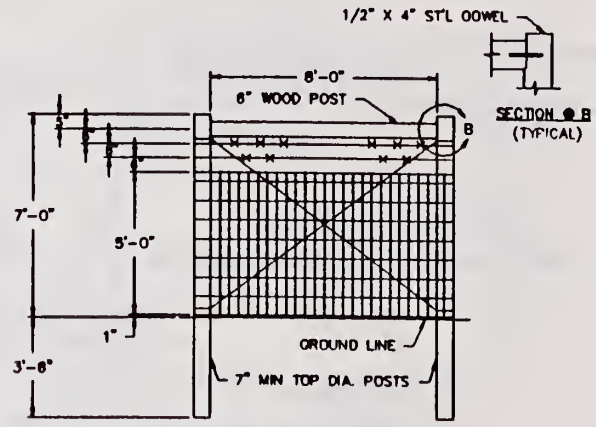


CORNER OR END PANEL ASS'Y

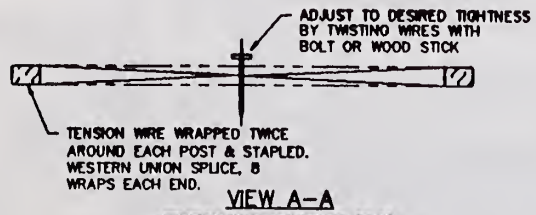


TYPICAL LINE FENCE DET.

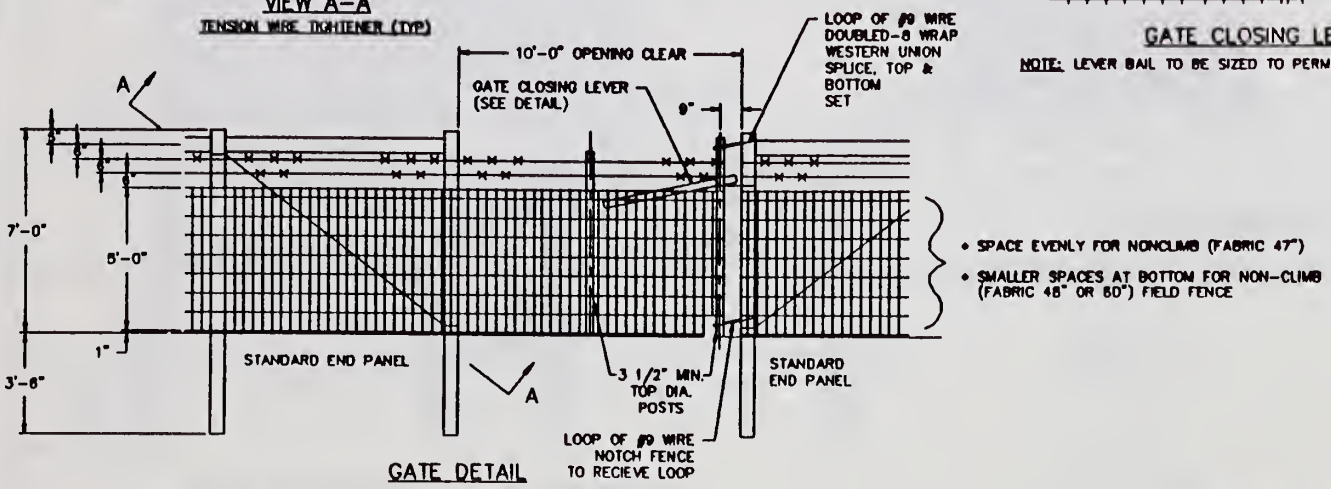
WOVEN WIRE FENCE: FS RR-F-00221,TYPE B, CLASS 1, ZINC COATING 0.8 OZ/SQ. FT. DESIGN NO. 1047-12-12 1/2



PULL POST ASSEMBLY

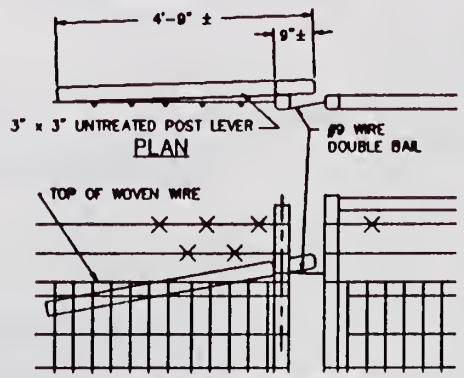


VIEW A-A
TENSION WIRE TIGHTENER (TYP)



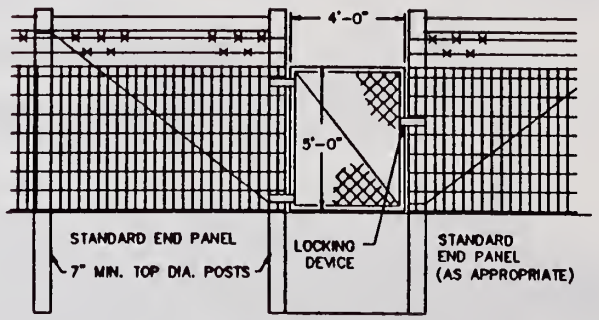
GATE DETAIL

NOTE: LEVER BAIL TO BE SIZED TO PERMIT TIGHT CLOSURE



GATE CLOSING LEVER

NOTE: LEVER BAIL TO BE SIZED TO PERMIT TIGHT CLOSURE



STEEL PANEL GATE

GATE FRAME: 1 1/4" ST'D PIPE, 2.27 #/FT. FS RR-F-183 OR 1 1/2" SQUARE 1.90 #/FT.

F.S.BRIC, HINGES, LATCHES: IN ACCORDANCE WITH F.S. RR-F-183 THE LATCH SHALL BE SUITABL FOR LOCKING WITH A PADLOCK

DATE	BY	DRN	REVISION
			DELETE MATERIAL & SPECIFICATION
1/79	DCR	CAB	REFERENCES.
9/87	MM		CHG.HEIGHT
9/86	JER		CHG.HEIGHT

C0003000
OCT. '87

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION SIX
THE PACIFIC NORTHWEST REGION

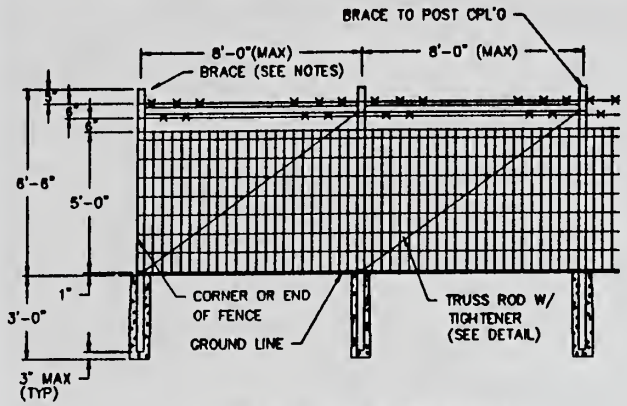
DRAWN DATE
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

5'-0" WOVEN W
WITH WOOD POS
STANDARD DETA

SHT. 1
OF

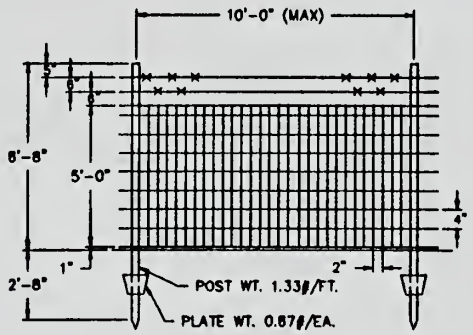
THE PACIFIC NORTHWEST REGION
DRAWN DATE
DESIGNED DATE
CHECKED DATE
REVIEWED DATE
6'-0" CHAIN LINK
STANDARD DETAIL
SHT 3
OF

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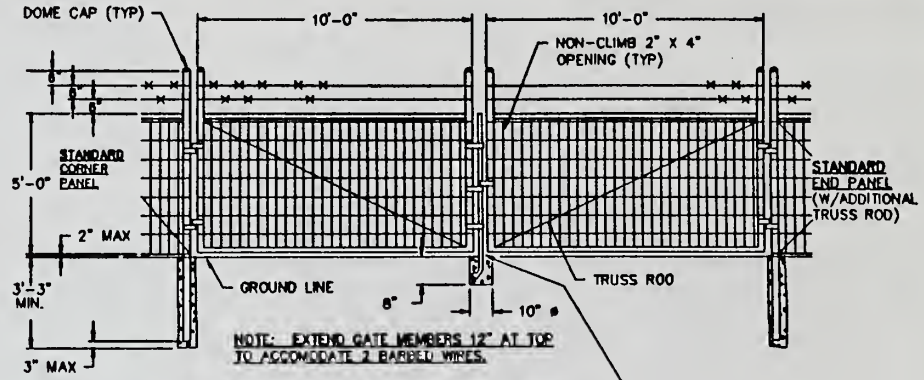


CORNER OR END PANEL ASS'Y.

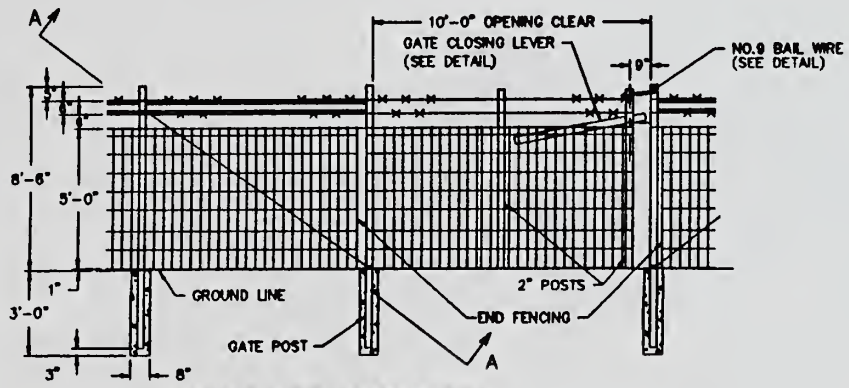
NOTE: DELETE SECOND PANEL WHEN DISTANCE TO NEXT CORNER, PULL POST, OR GATE ASSEMBLY IS LESS THAN 100 FEET.



TYPICAL LINE FENCE DETAIL
"U" OR "T" TYPE STEEL POSTS

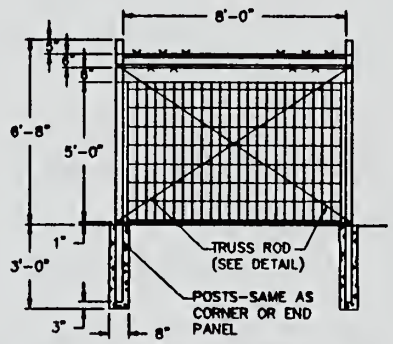


DOUBLE PANEL GATE ASSEMBLY

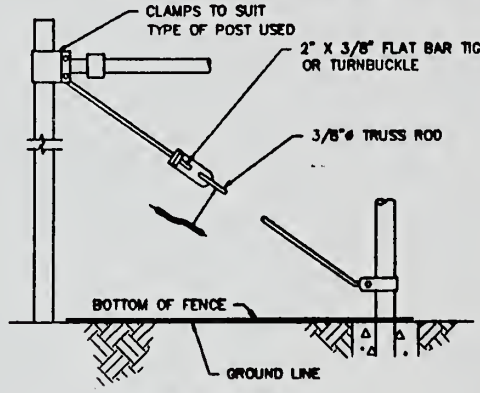


SINGLE PANEL GATE DETAIL

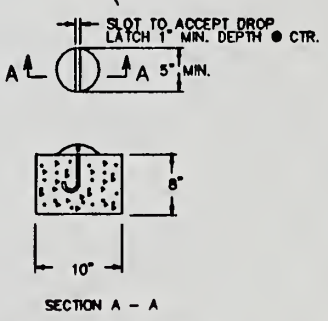
NOTE: LEVER BAIL TO BE SIZED TO PERMIT TIGHT CLOSURE



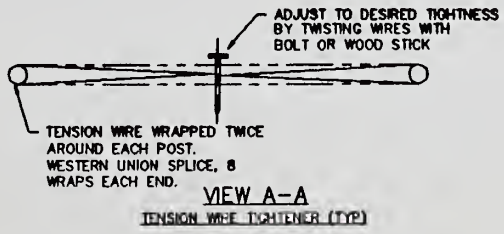
PULL POST ASSEMBLY



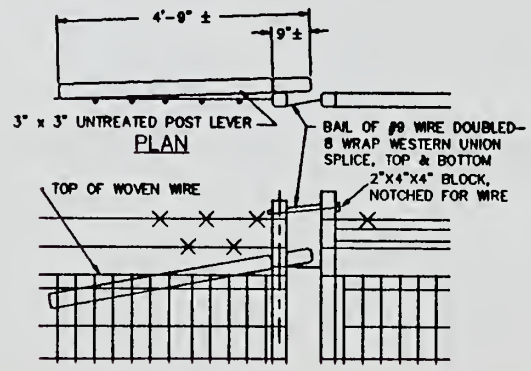
TYPICAL DETAIL
TRUSS ROD TIES



GATE DROP INSERT



VIEW A-A
TENSION WIRE TIGHTENER (TYP)



GATE CLOSING LEVER

NOTE: LEVER BAIL TO BE SIZED TO PERMIT TIGHT CLOSURE

STEEL POST NOTES:

WOVEN WIRE: NON-CLIMB 2" X 4" OPENING

DESIGNER OPTION: FIELD FENCE

BRACES: 1 1/4" ROUND (2.27#/FT.), 1 1/2" SQ. (1.90#/FT.) H-1 1/2" X 1 5/16" X 1/8" (2.27#/FT. FS RR-F-183.

TRUSS RODS: 3/8"ø WITH TIGHTENER (SEE DETAIL) FS RR-F-183.

POSTS: 2"ø (3.56#) STOCK; FS RR-F-183.

DATE	BY	DRN	REVISION
			DELETE MATERIAL & SPECIFICATION
1/79	DCR	CAB	REFERENCES.
9/87	MM		CHG.HEIGHT-ADD STL POST NOTES

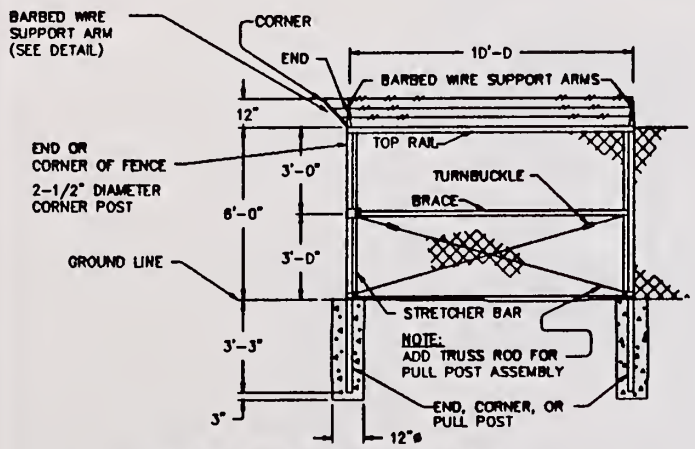
C0003200
OCT. '87

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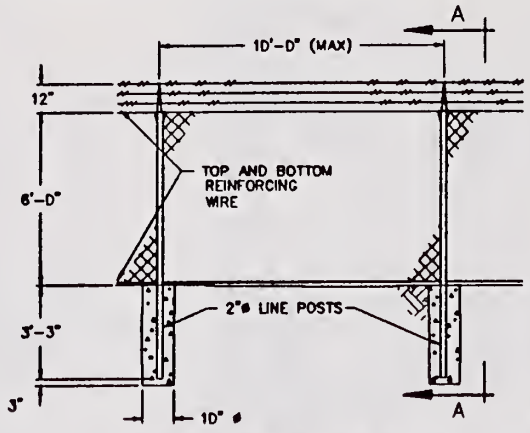
5'-0" WOVEN WIRE FENCE WITH STEEL POSTS (STANDARD DETAILS)

SHT. 2
OF

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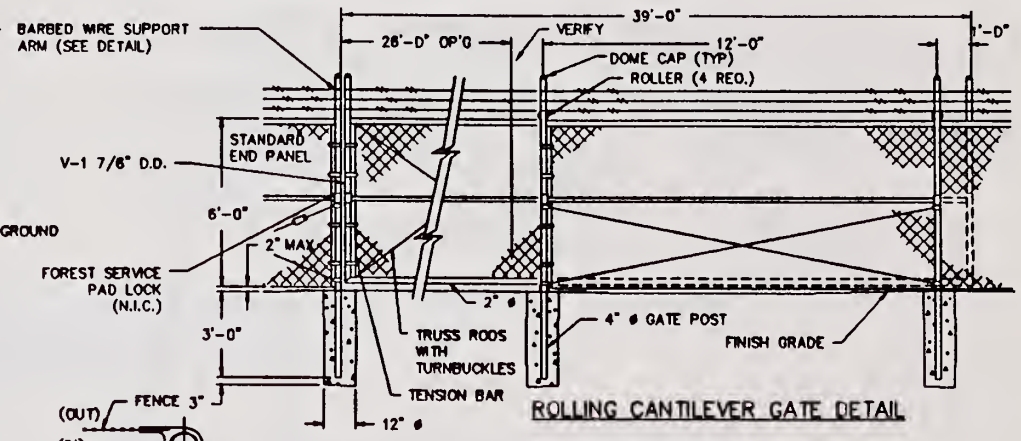
CORNER OR END PANEL ASS'Y
PULL POST ASS'Y SIMILAR (EXCEPT AS INDICATED)
SCALE: 3/8" = 1'-0"



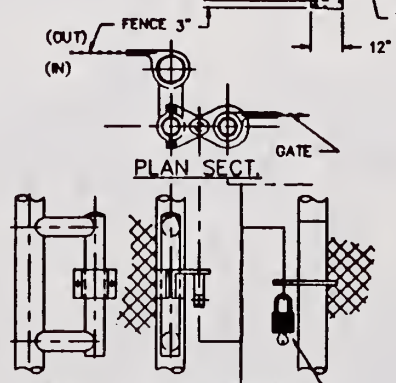
TYPICAL LINE FENCE DETAIL
SCALE: 3/8" = 1'-0"



VIEW A-A

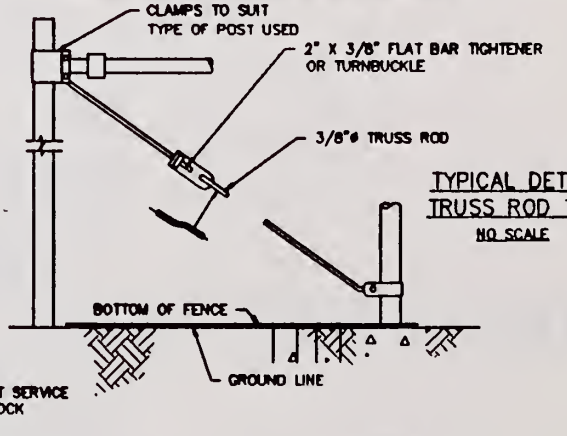


ROLLING CANTILEVER GATE DETAIL



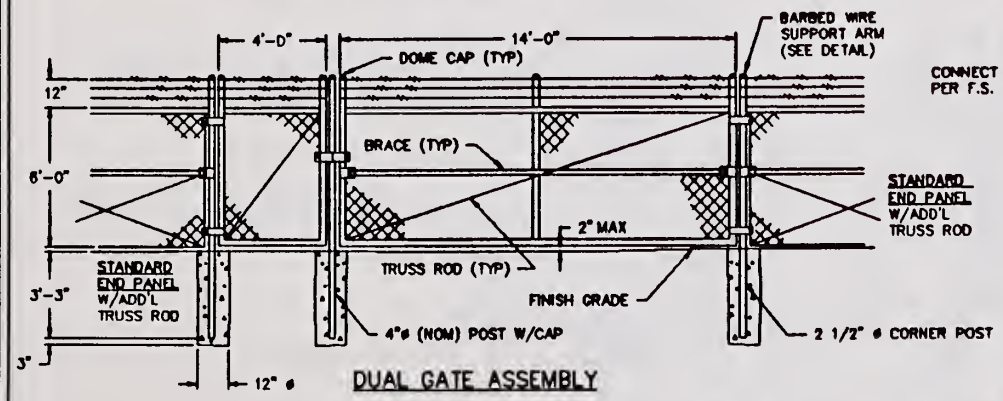
PLAN SECT.

GATE LATCH DETAIL
NO-SCALE

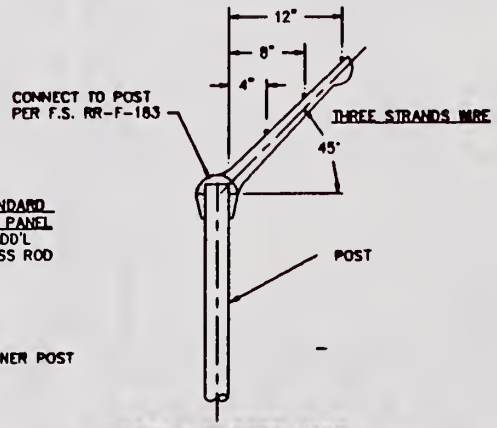


TYPICAL DETAIL
TRUSS ROD TIES
NO SCALE

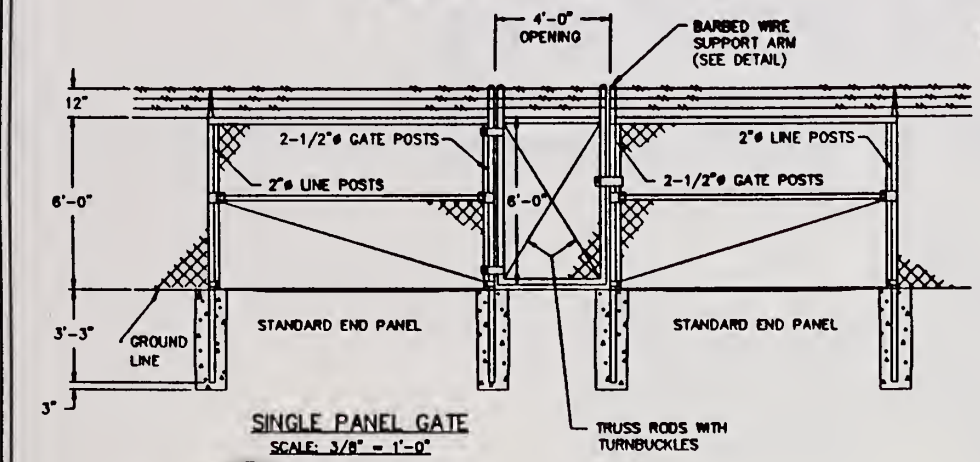
FOREST SERVICE PAD LOCK (N.I.C.)



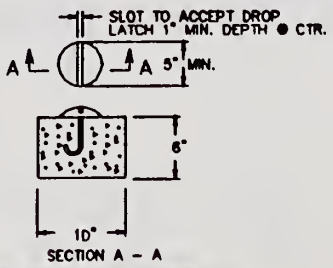
DUAL GATE ASSEMBLY



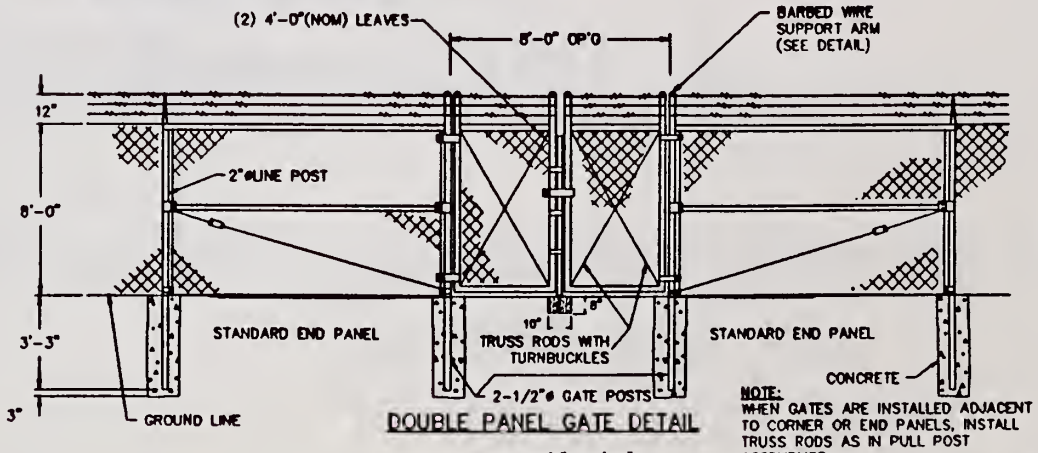
DETAIL BARBED WIRE
SUPPORT ARM AND POST CAP
SCALE: 1-1/2" = 1'-0"



SINGLE PANEL GATE
SCALE: 3/8" = 1'-0"



GATE DROP INSERT



DOUBLE PANEL GATE DETAIL
SCALE: 3/8" = 1'-0"

NOTE:
WHEN GATES ARE INSTALLED ADJACENT TO CORNER OR END PANELS, INSTALL TRUSS RODS AS IN PULL POST ASSEMBLIES.
DESIGNER OPTION: SPECIFY WIDTH DESIRED

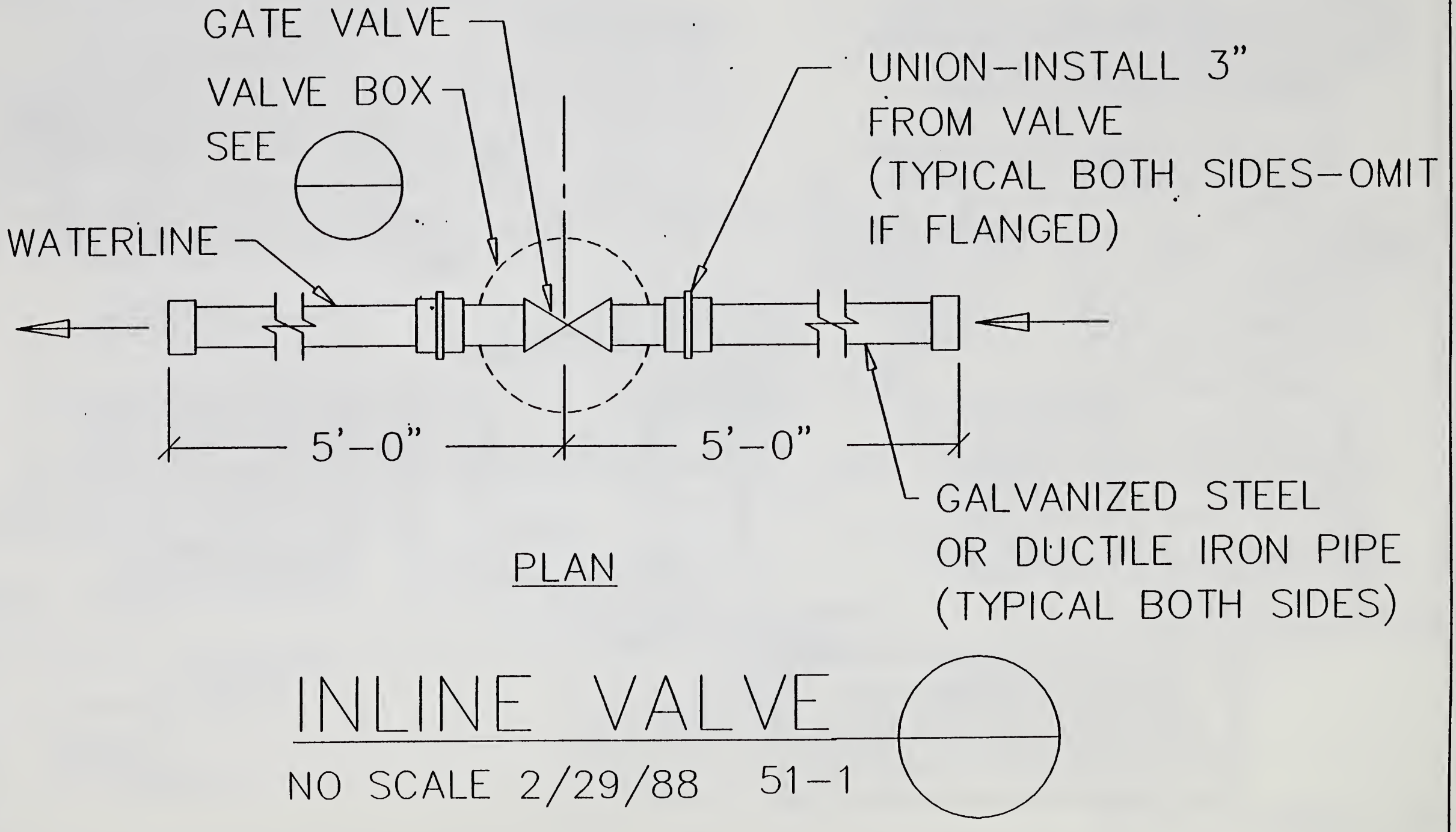
C0003100
OCT. '87

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

DRAWN DATE
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

6'-0" CHAIN LINK STANDARD DETAIL

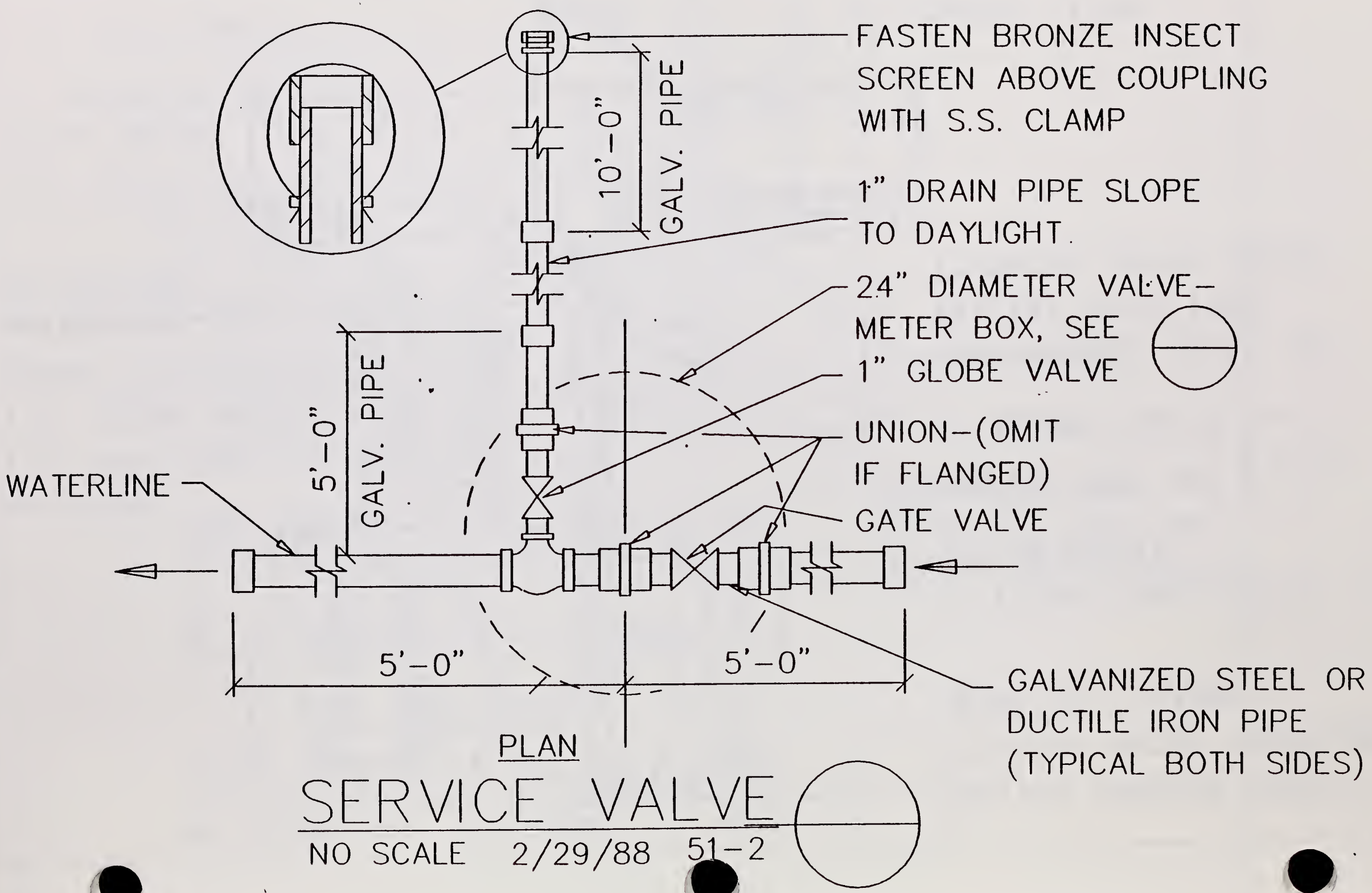
SHT. 3
OF



PLAN

INLINE VALVE

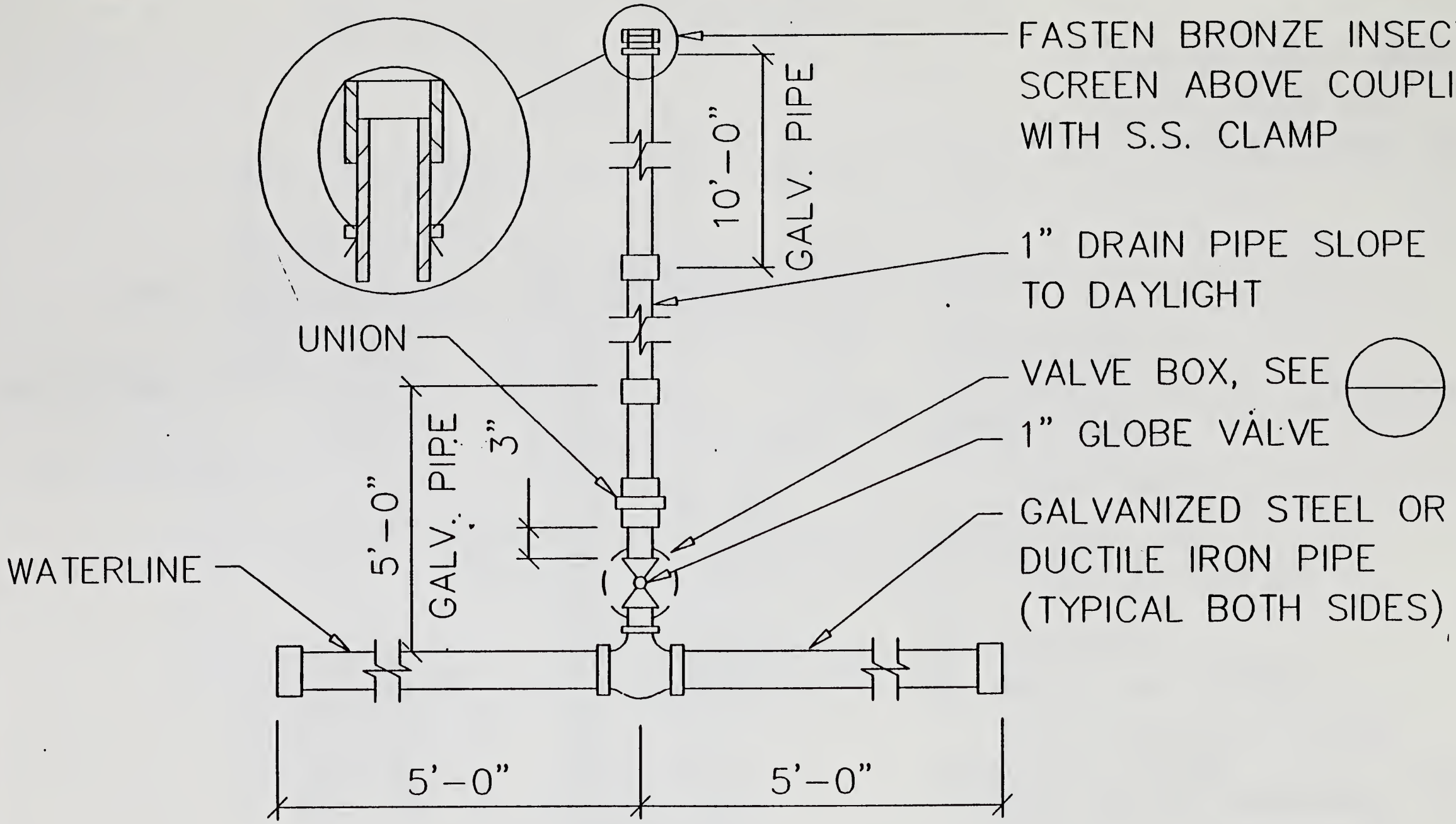
NO SCALE 2/29/88 51–1



PLAN

SERVICE VALVE

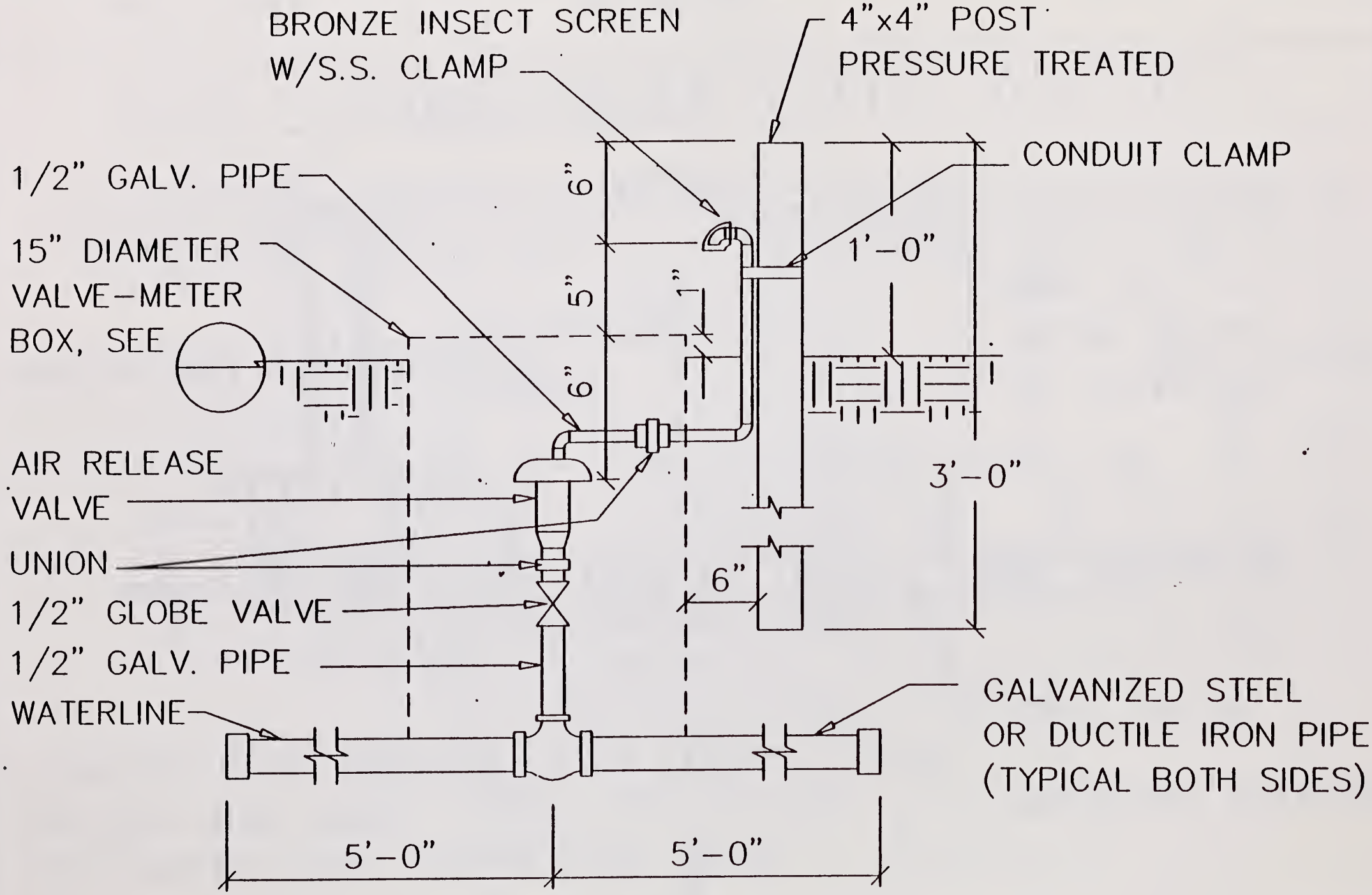
NO SCALE 2/29/88 51-2



PLAN

DRAIN VALVE

NO SCALE 2/29/88 51-3

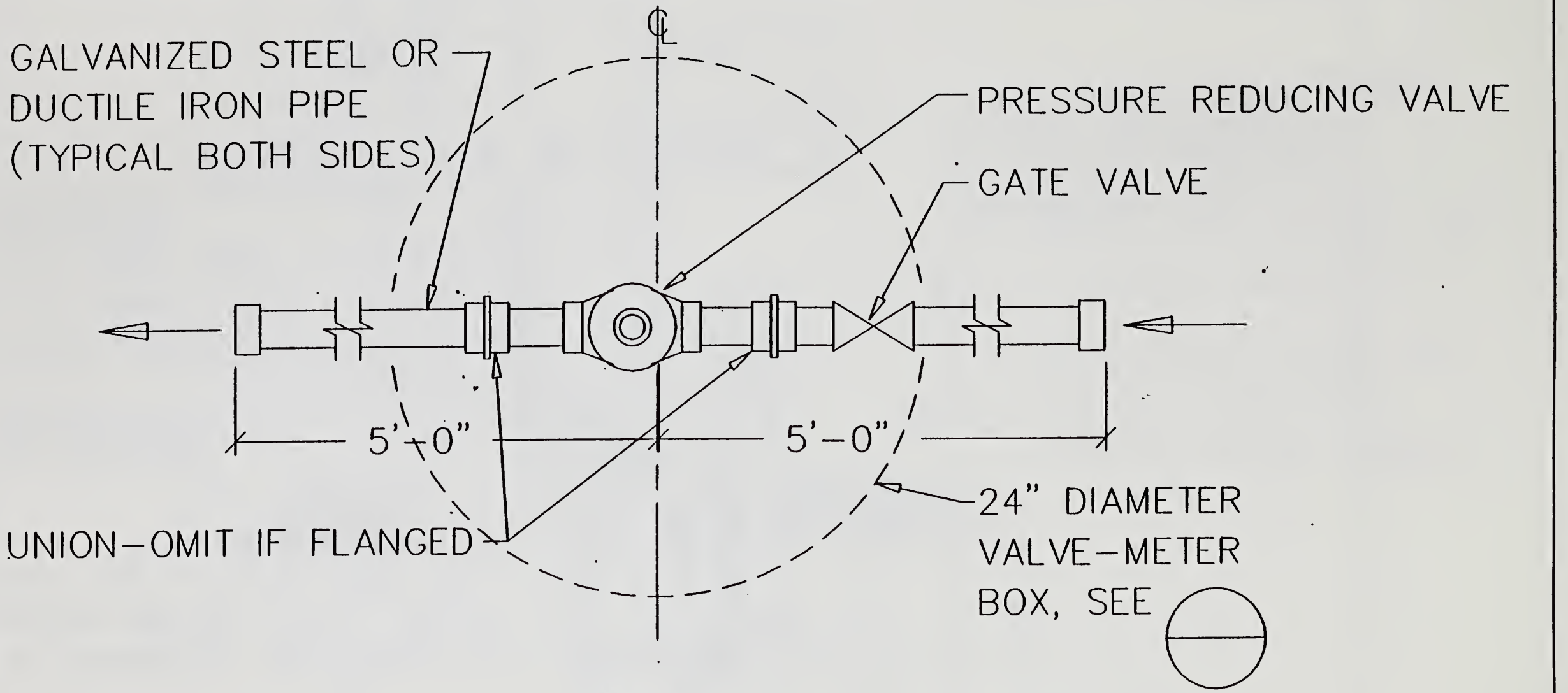


ELEVATION

AIR RELEASE VALVE

NO SCALE 2/29/88 51-4

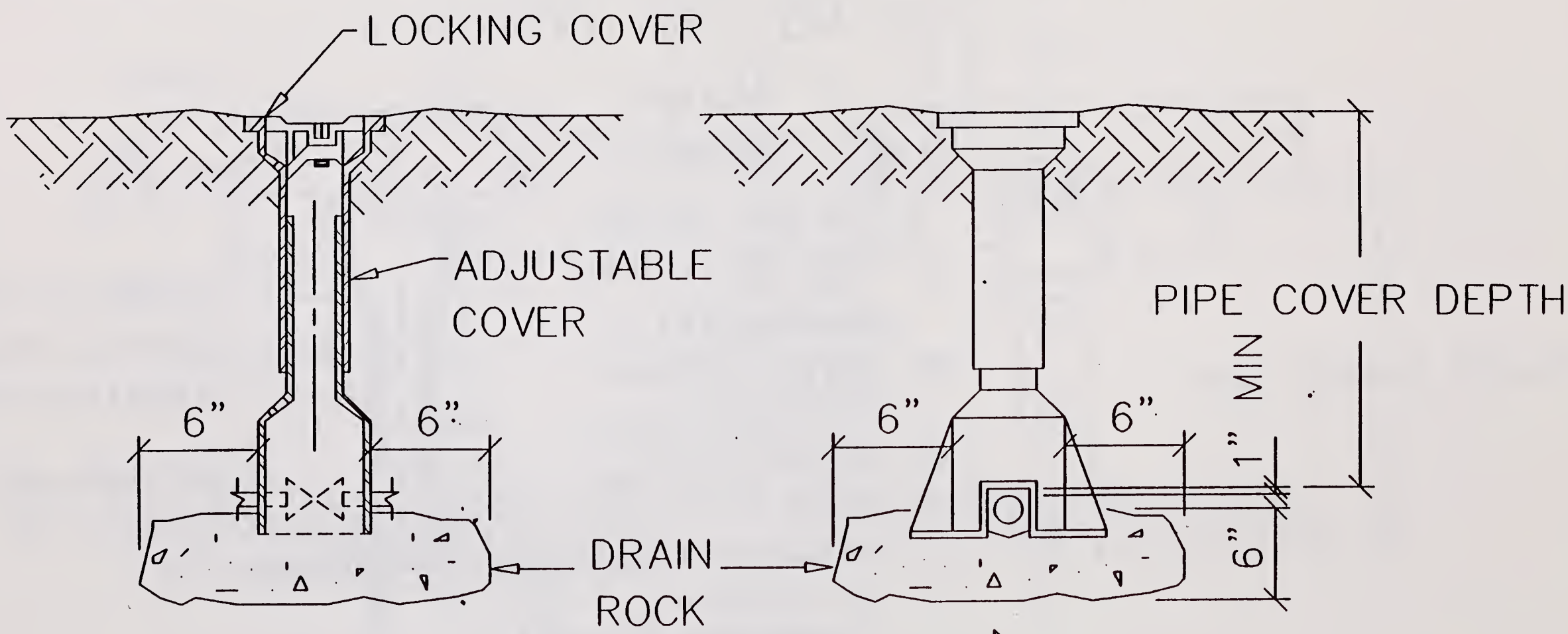
NO SCALE 29/88



PLAN

PRESSURE REDUCING VALVE

NO SCALE 2/29/88 51-5

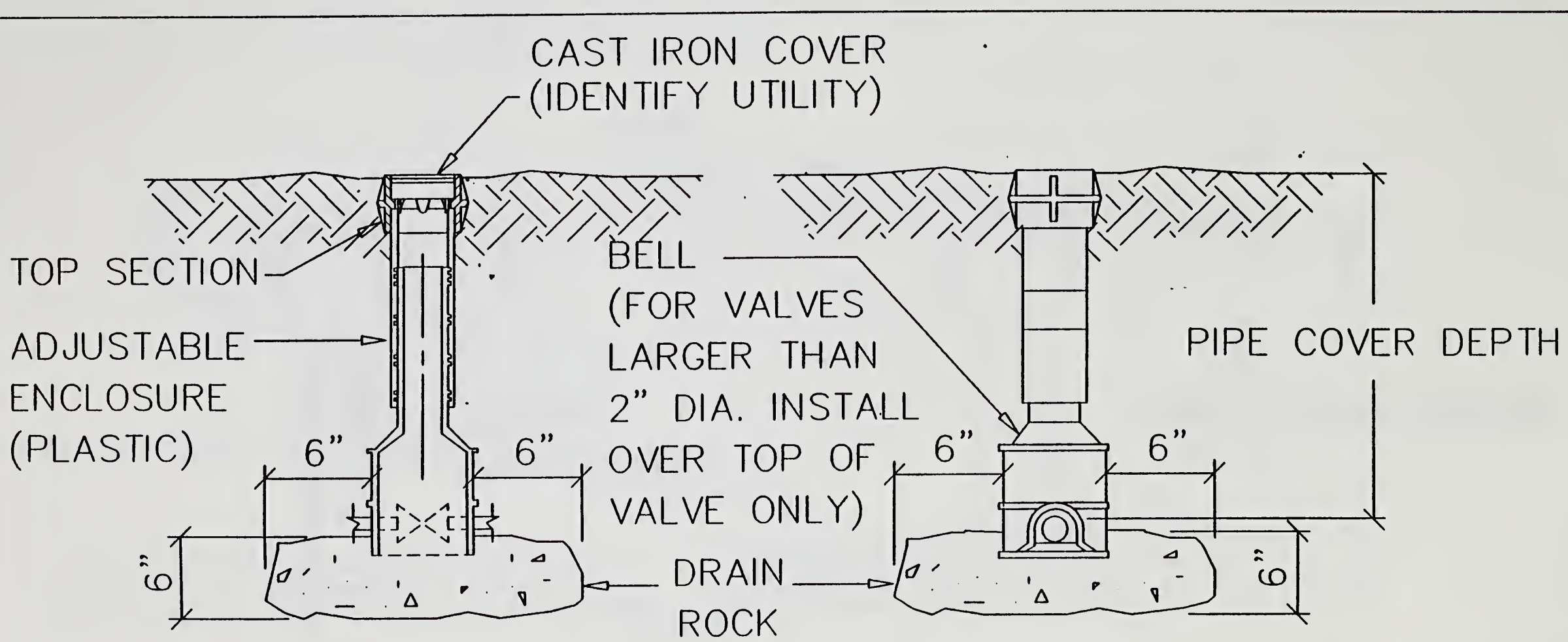


VALVE BOX

(CAST IRON) 51-6

NO SCALE 29/88

NO SCALE 2/29/88 S1-8

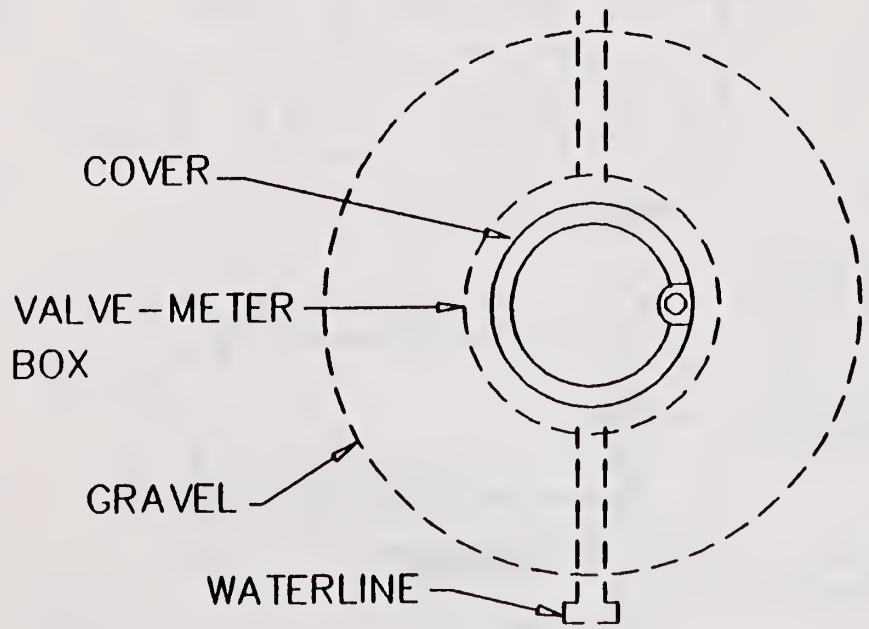


VALVE BOX

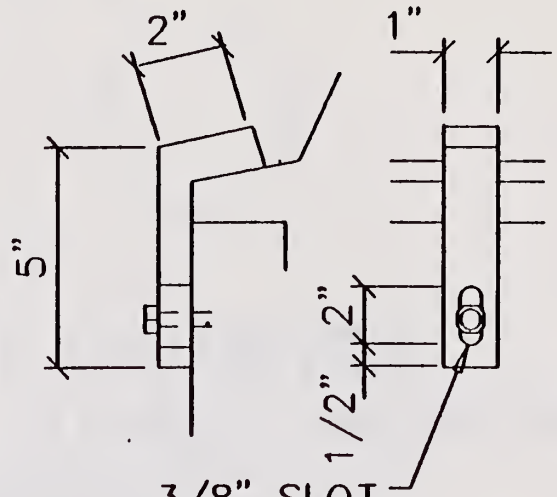
(PLASTIC) 51-7

NO SCALE 2/29/88

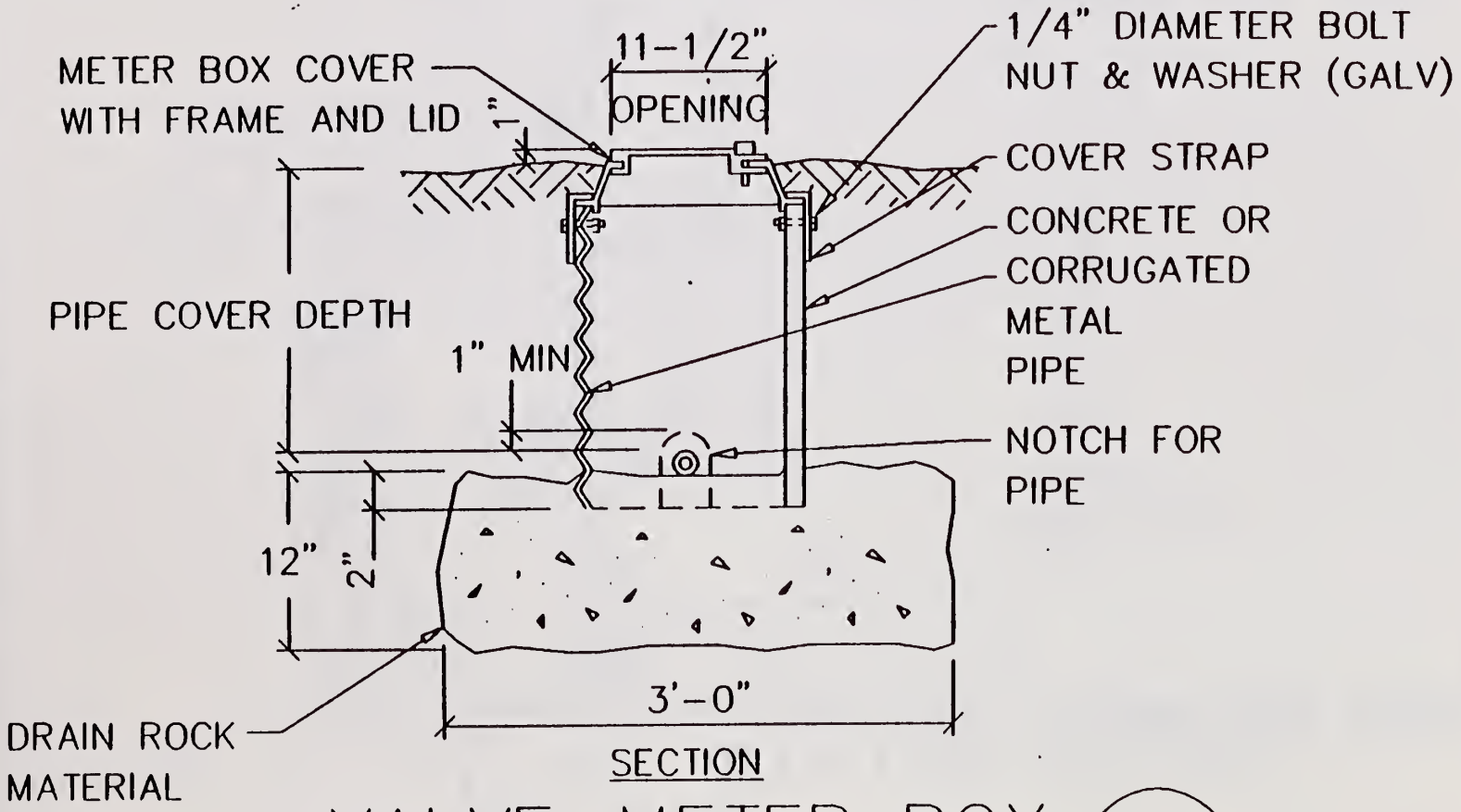
NO SCALE



PLAN



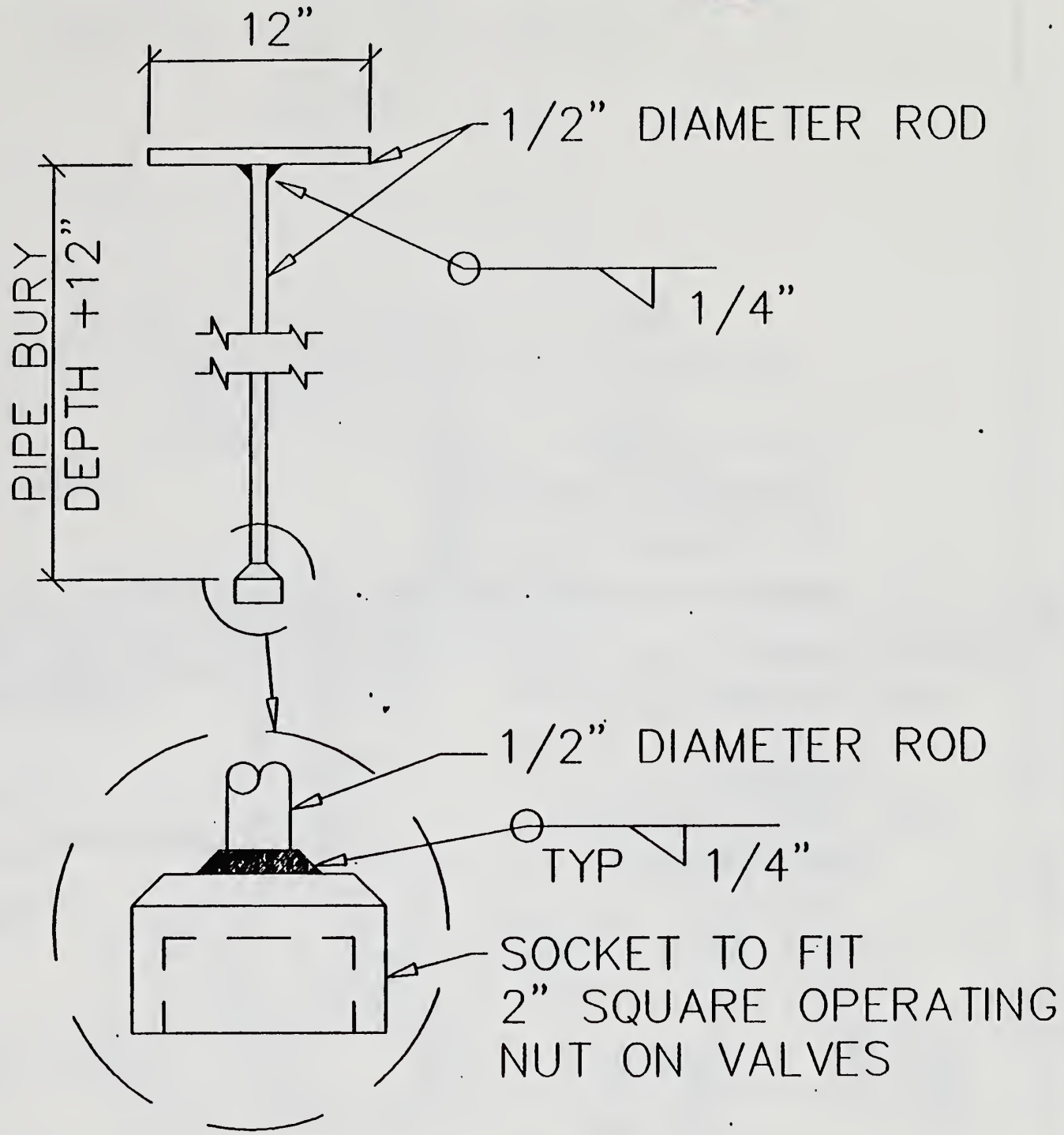
COVER STRAP
1"x7"x1/8" METAL BAR
(2 REQUIRED)



SECTION

VALVE-METER BOX

NO SCALE 2/29/88 51-8

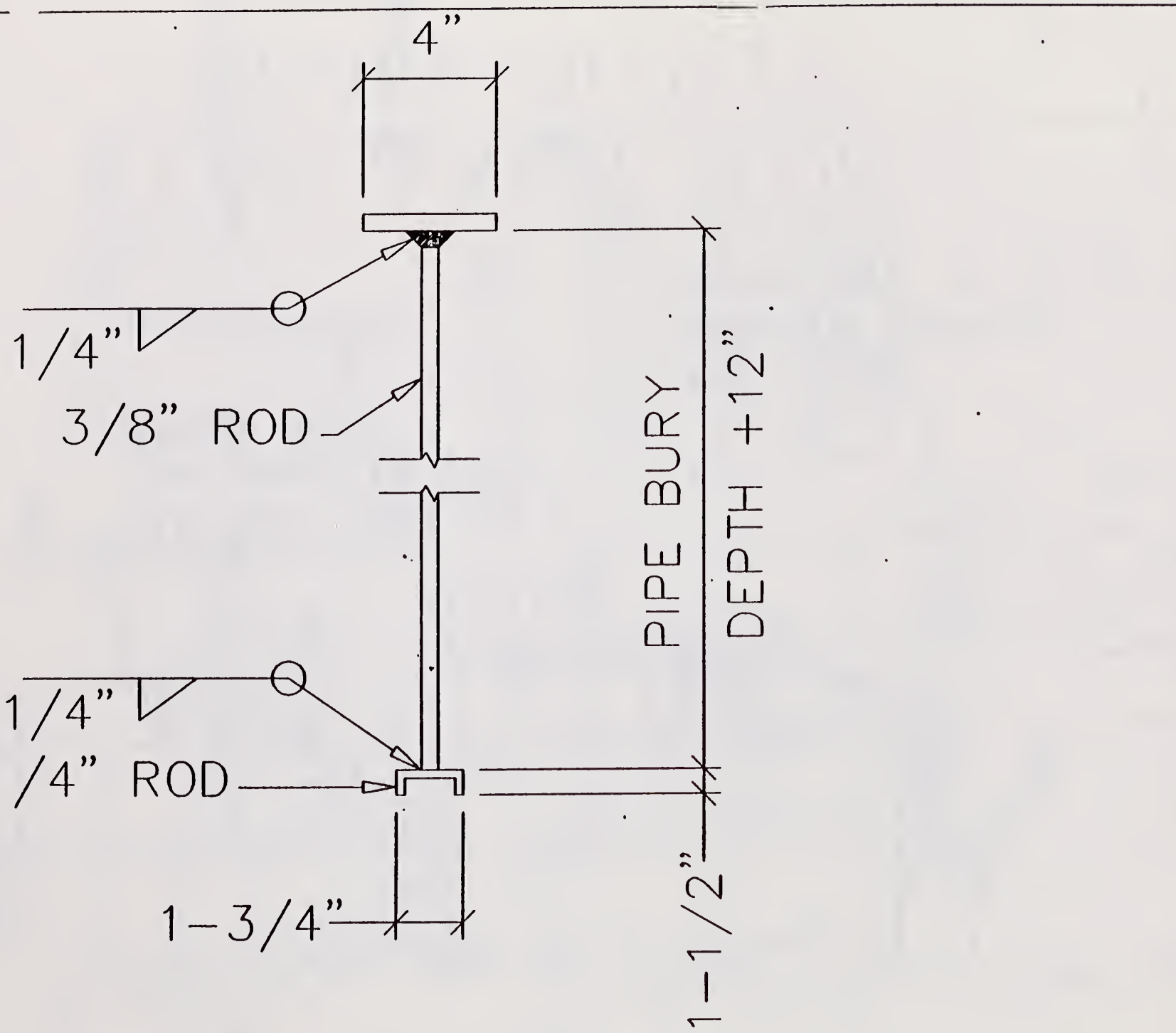


VALVE ROD

(FOR 2" AND LARGER VALVES)

NO SCALE

51-9
2/29/88



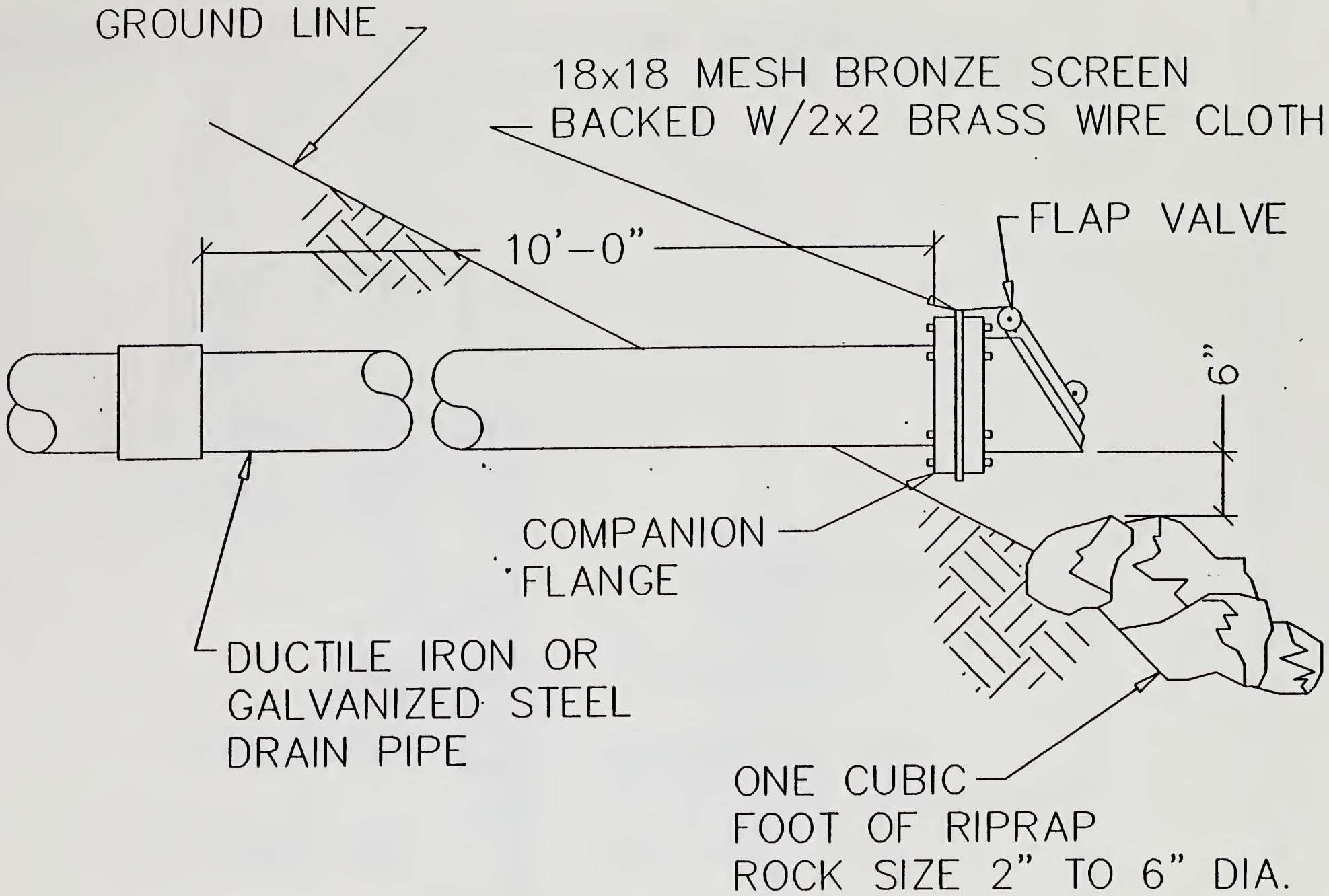
VALVE ROD

(FOR 1-1/2" AND SMALLER VALVES)

NO SCALE

51-10

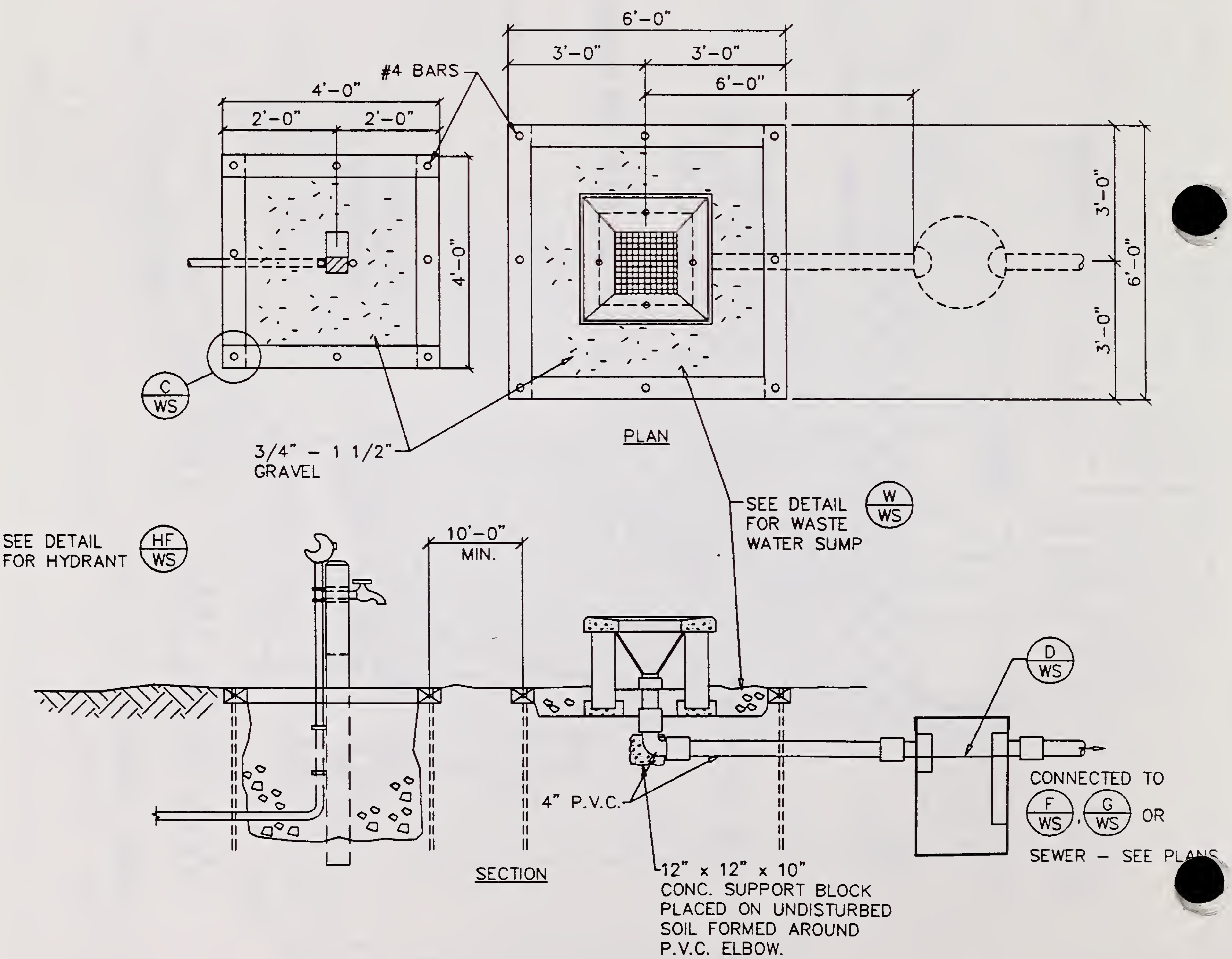
2/29/88



FLAP VALVE FOR DRAIN OUTLET

NO SCALE

51-11
2/29/88

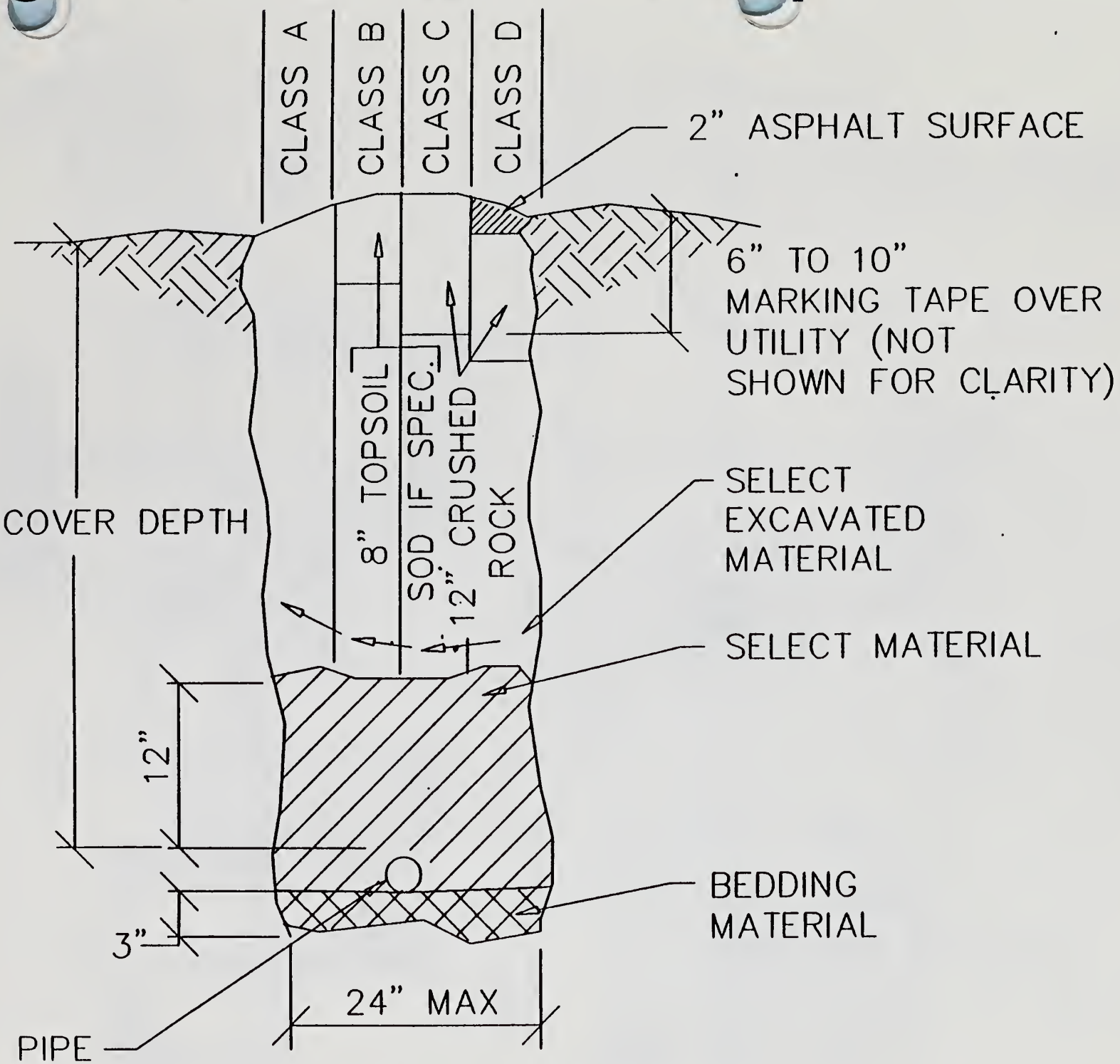


WASTE WATER SUMP & HYDRANT (WF/WS)

SCALE: 1/2"=1'-0"

51- 12

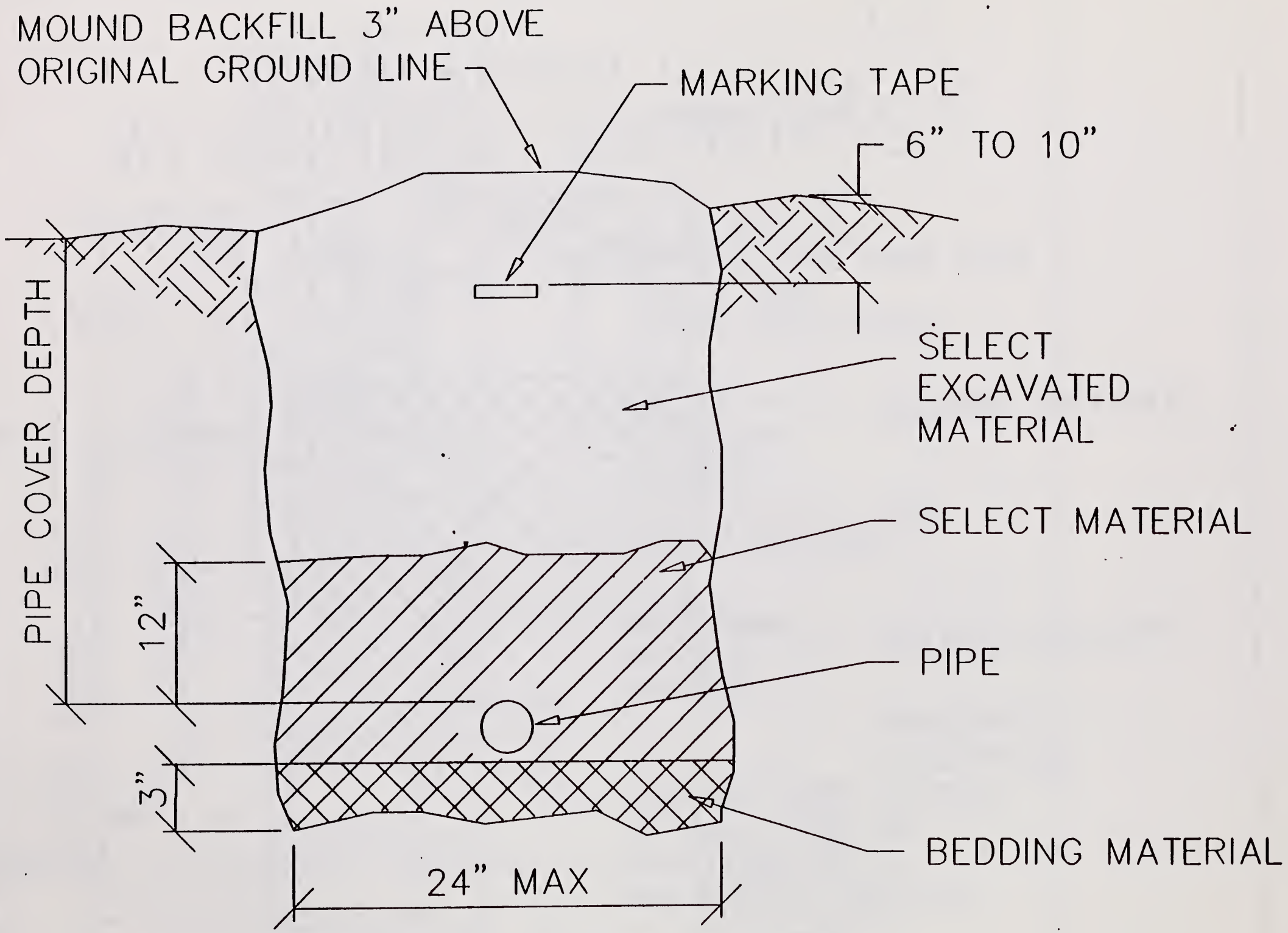
NO SCALE 2/29/ 51-22



WATERLINE TRENCH

NO SCALE

51-21
2/29/88

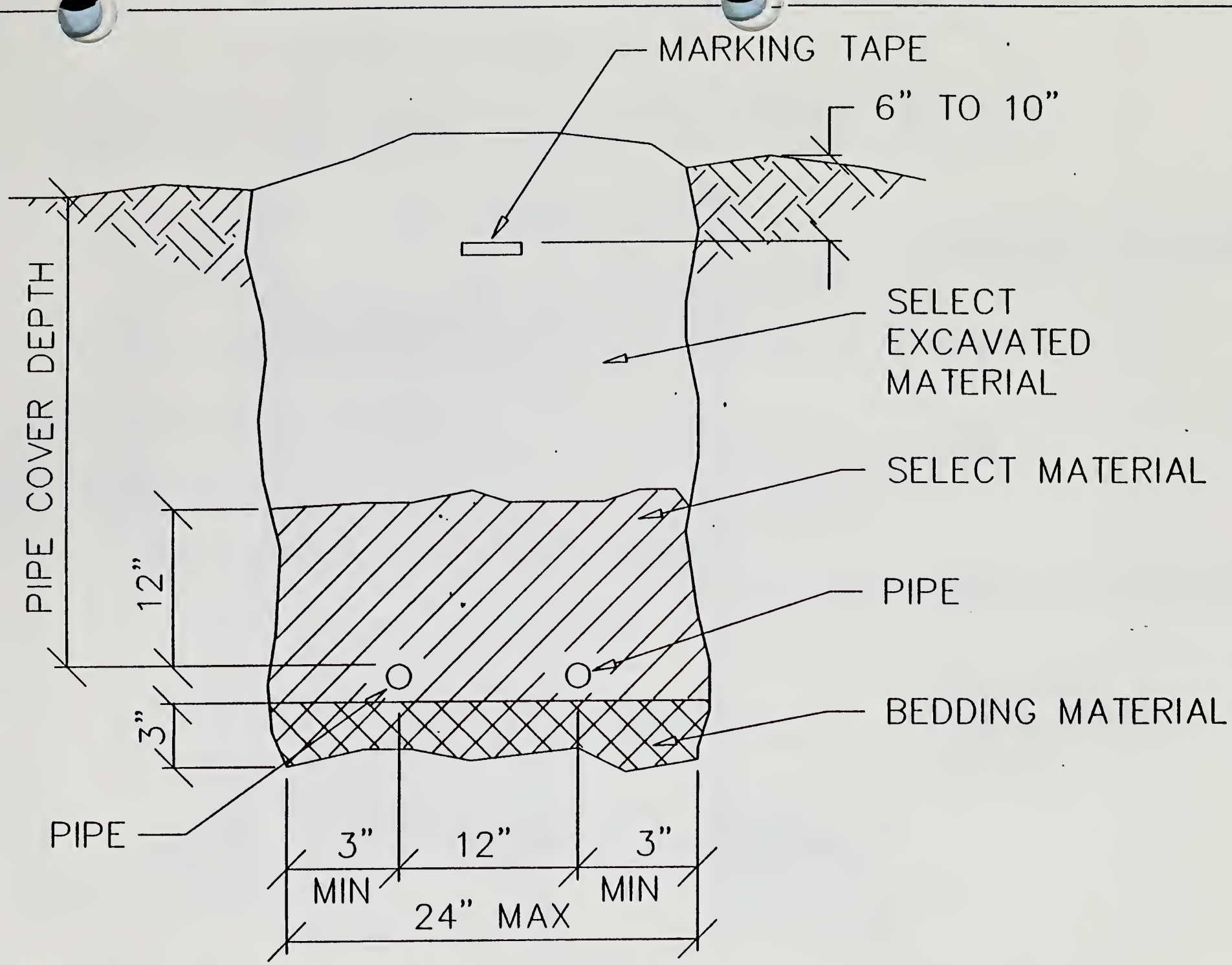


WATERLINE TRENCH

(CLASS A BACKFILL)

NO SCALE 2/29/

51-22



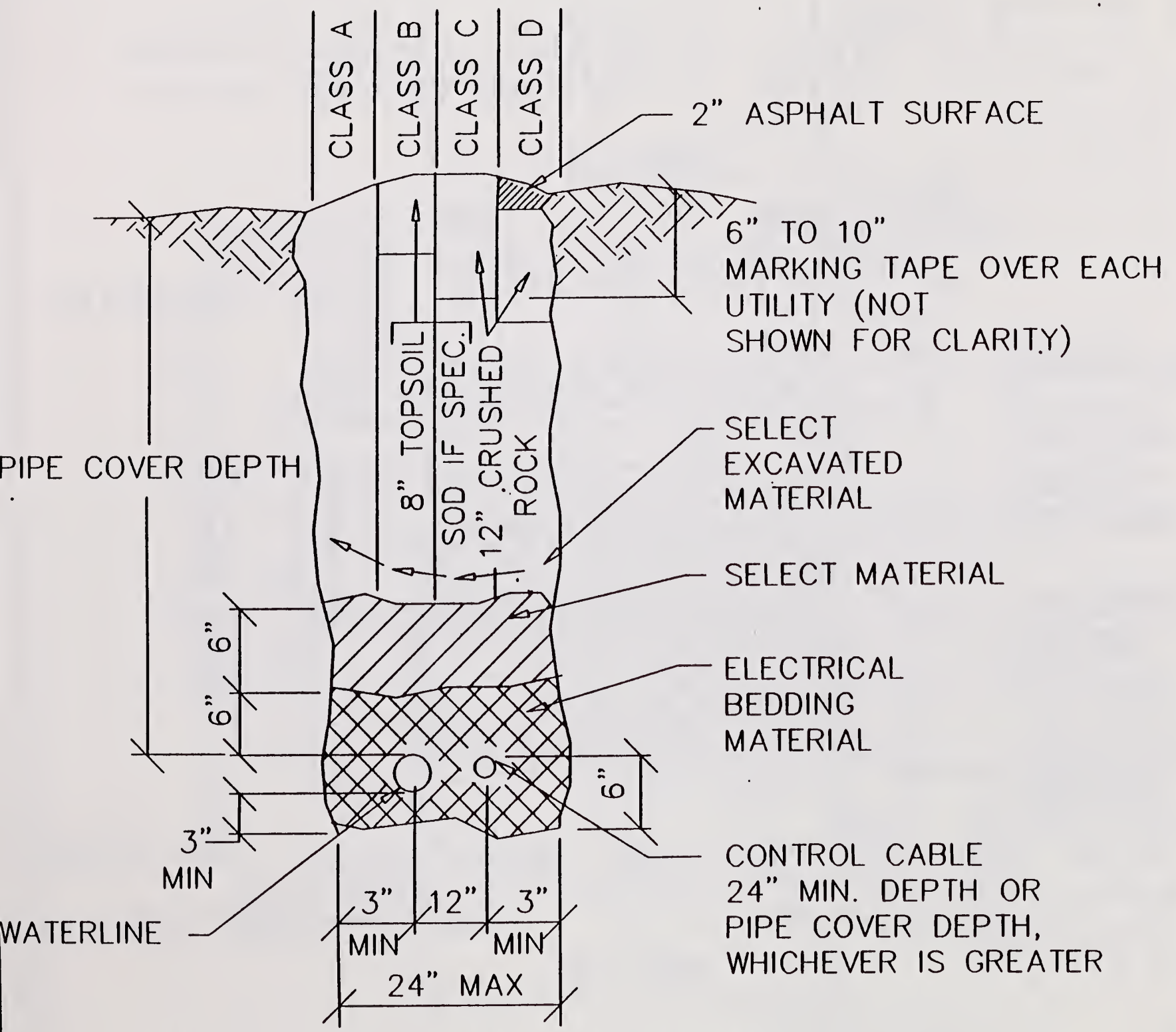
WATERLINES TRENCH

(CLASS A BACKFILL)

NO SCALE

51-23

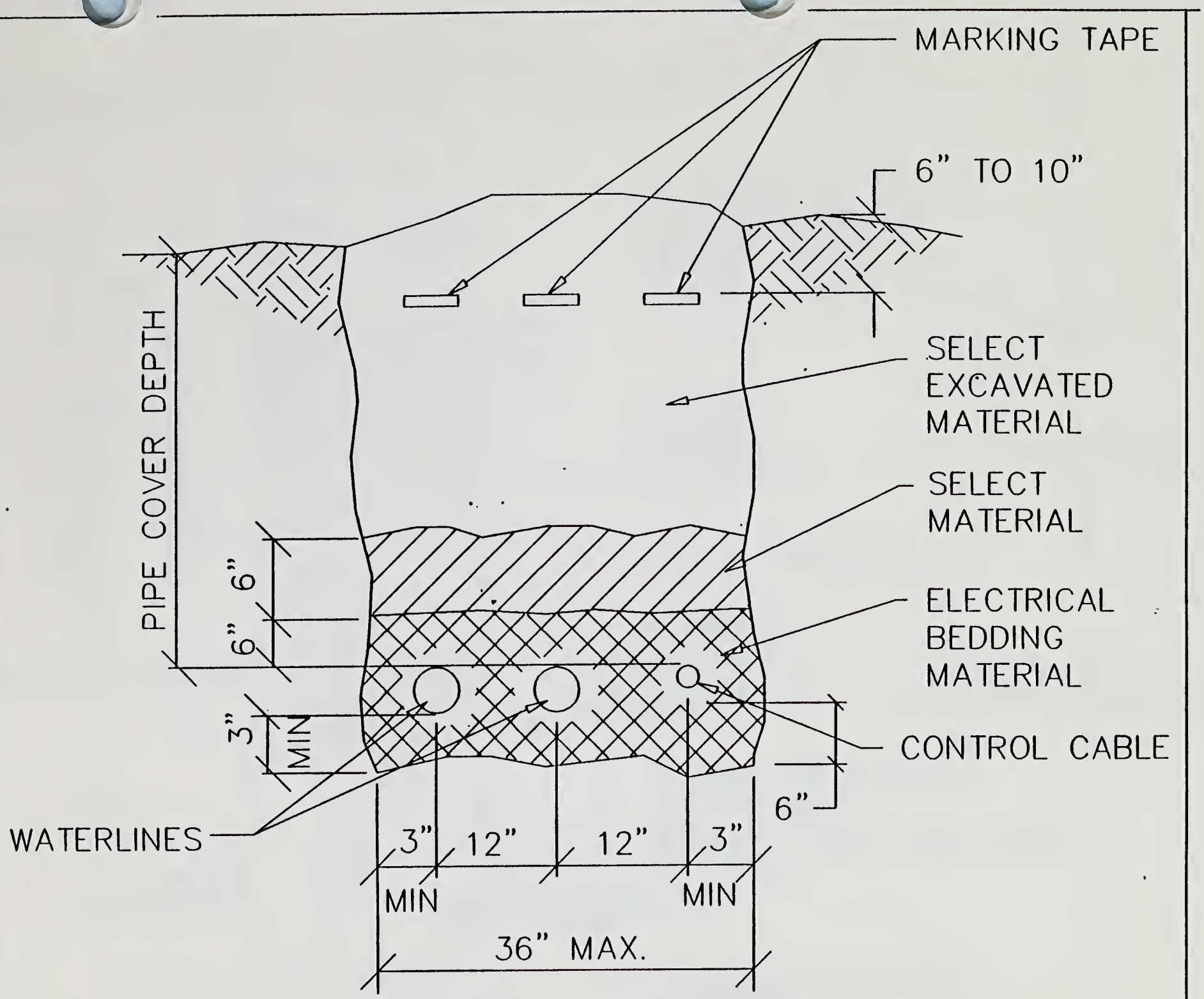
2/29/88



WATERLINE AND CONTROL CABLE TRENCH

NO[redacted]ALE 2/29/88 5[redacted]4

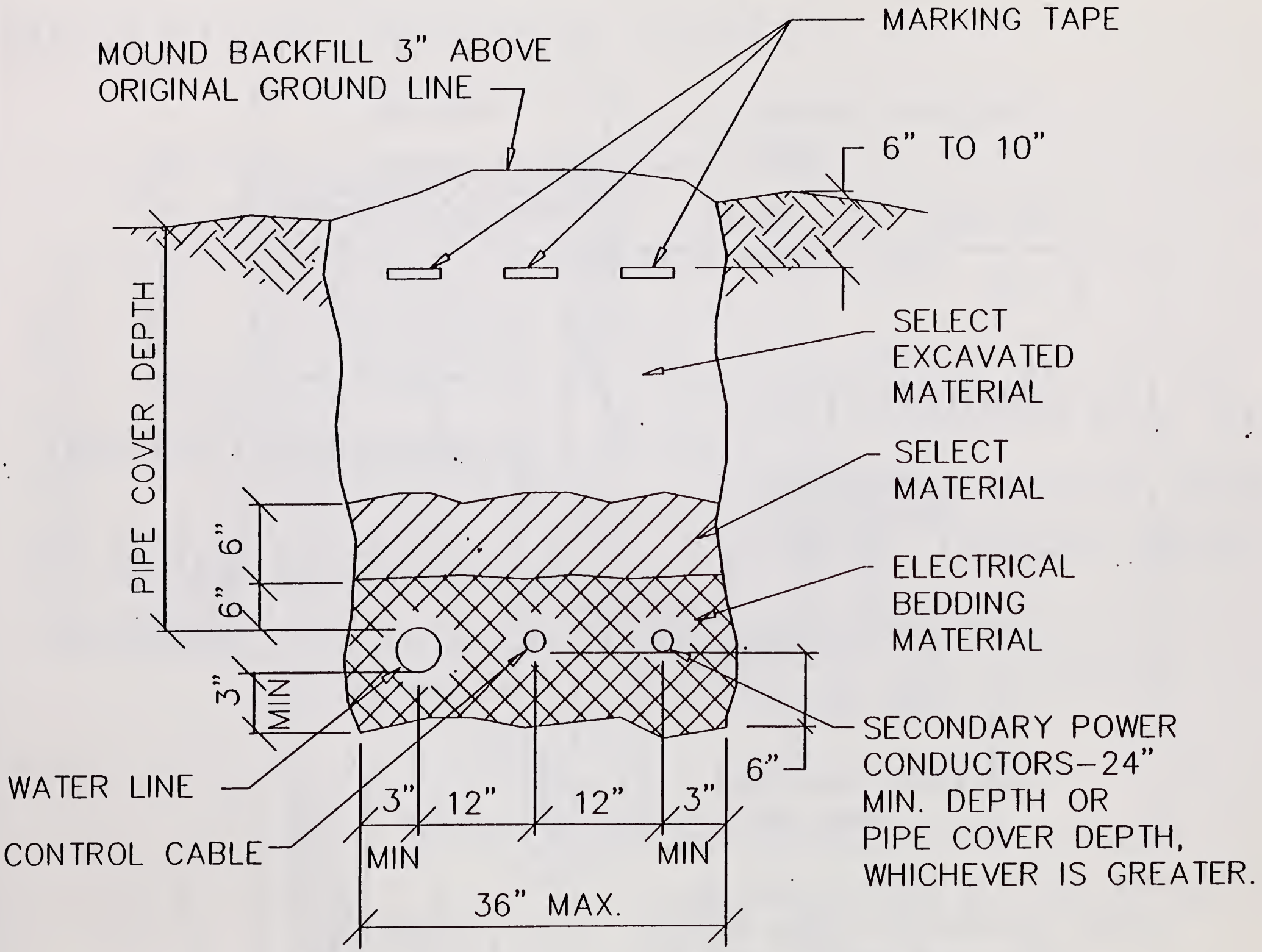
NO SCALE (CLASS A BACKFILL) 51-26 2/29/88



WATERLINES AND CONTROL CABLE TRENCH

2/29/88

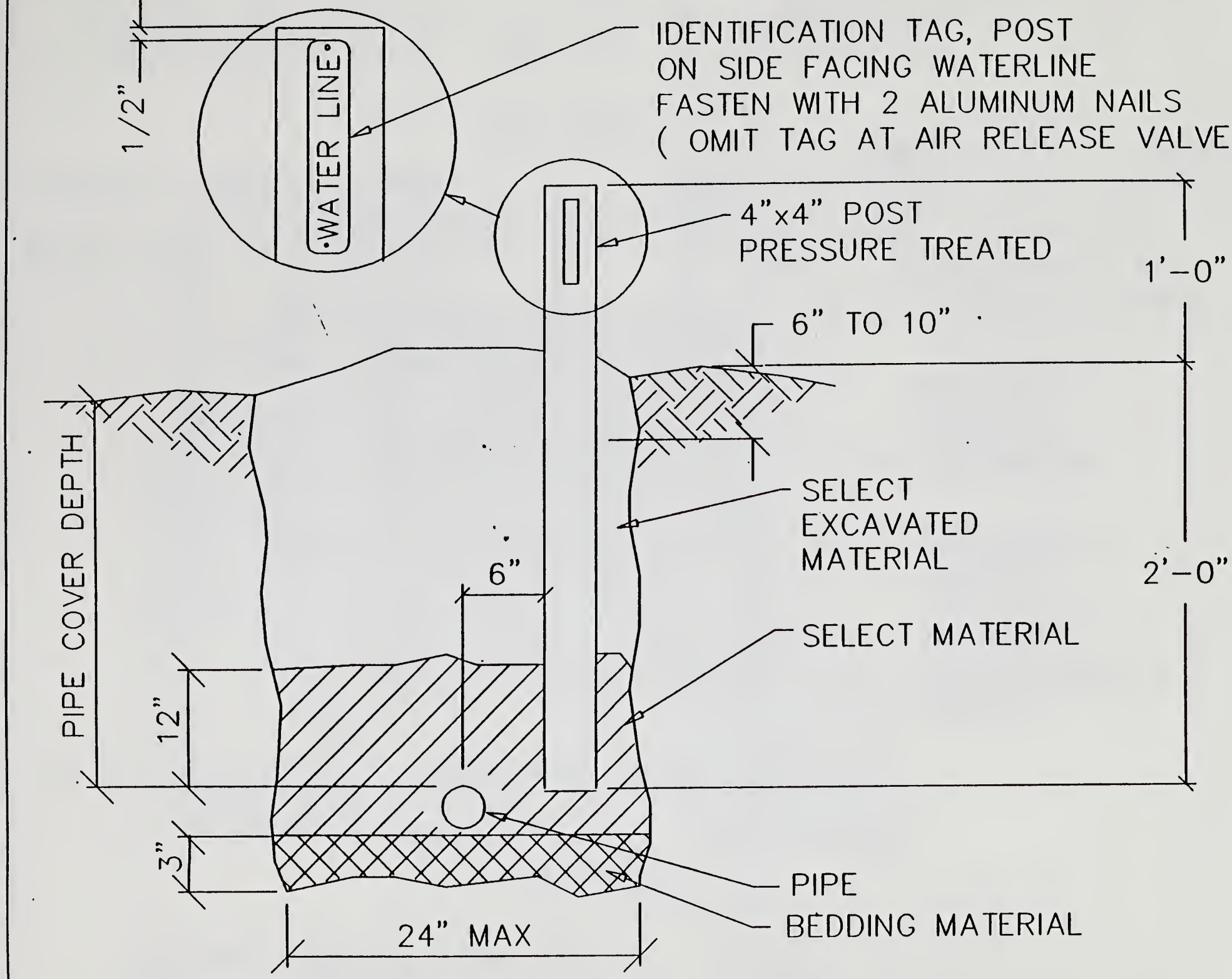
NO SCALE (CLASS A BACKFILL) 51-25



WATERLINE WITH CONTROL AND POWER CABLE TRENCH

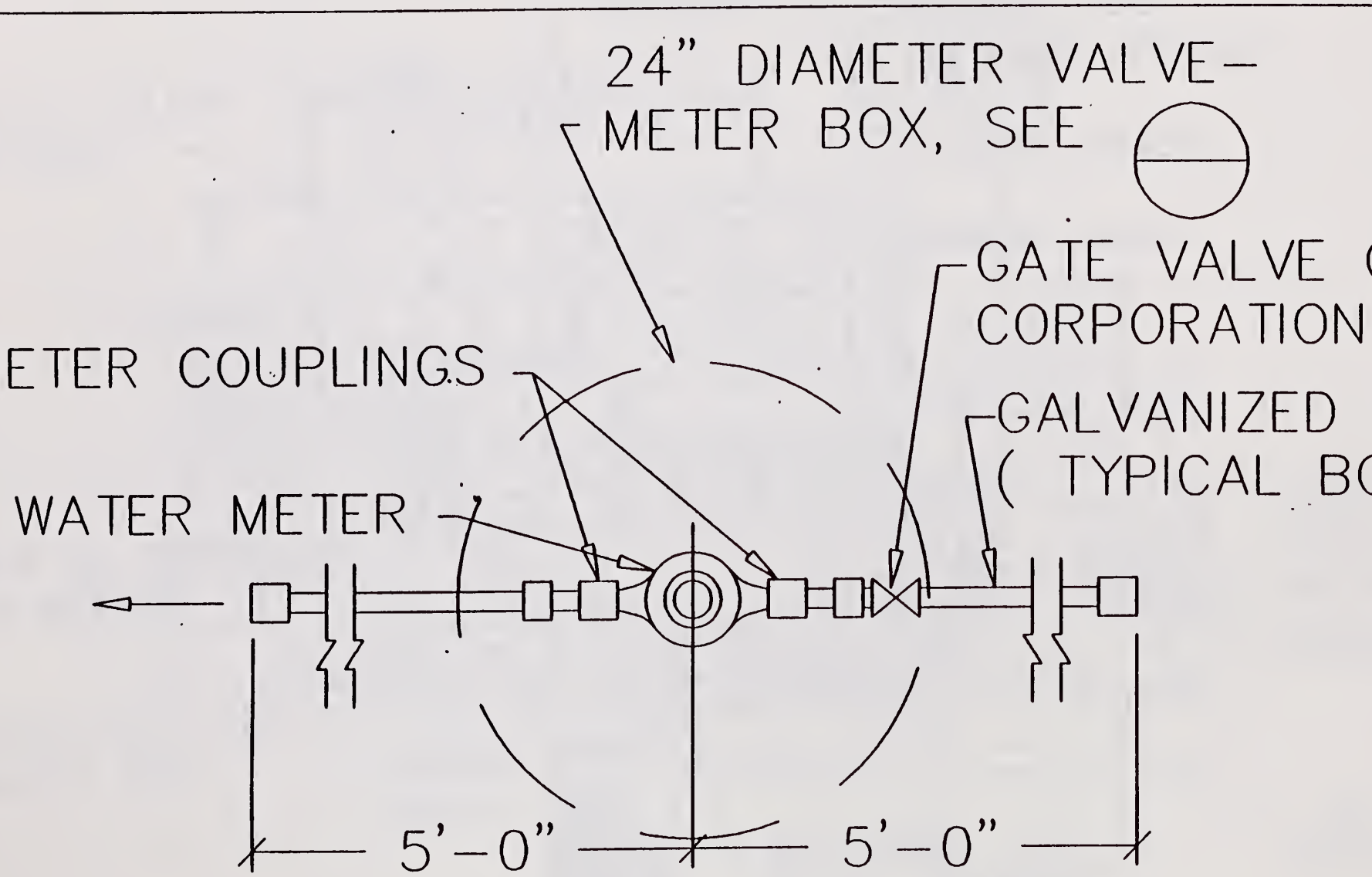
NO SCALE (CLASS A BACKFILL

51–26 2/29/88



WATERLINE MARKER POST

NO SCALE 2/29/88 51-27

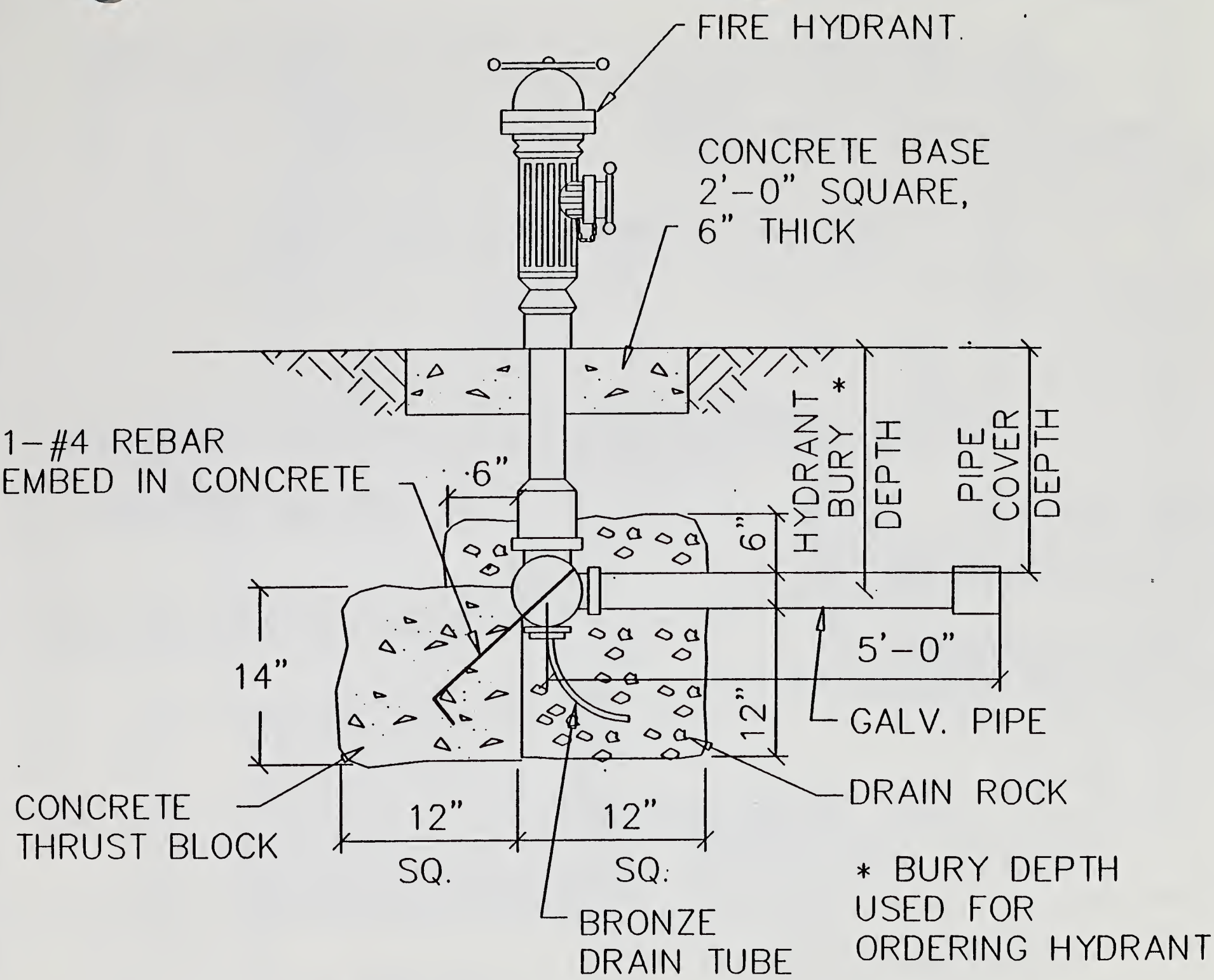


WATER METER

NO SCALE

51-28

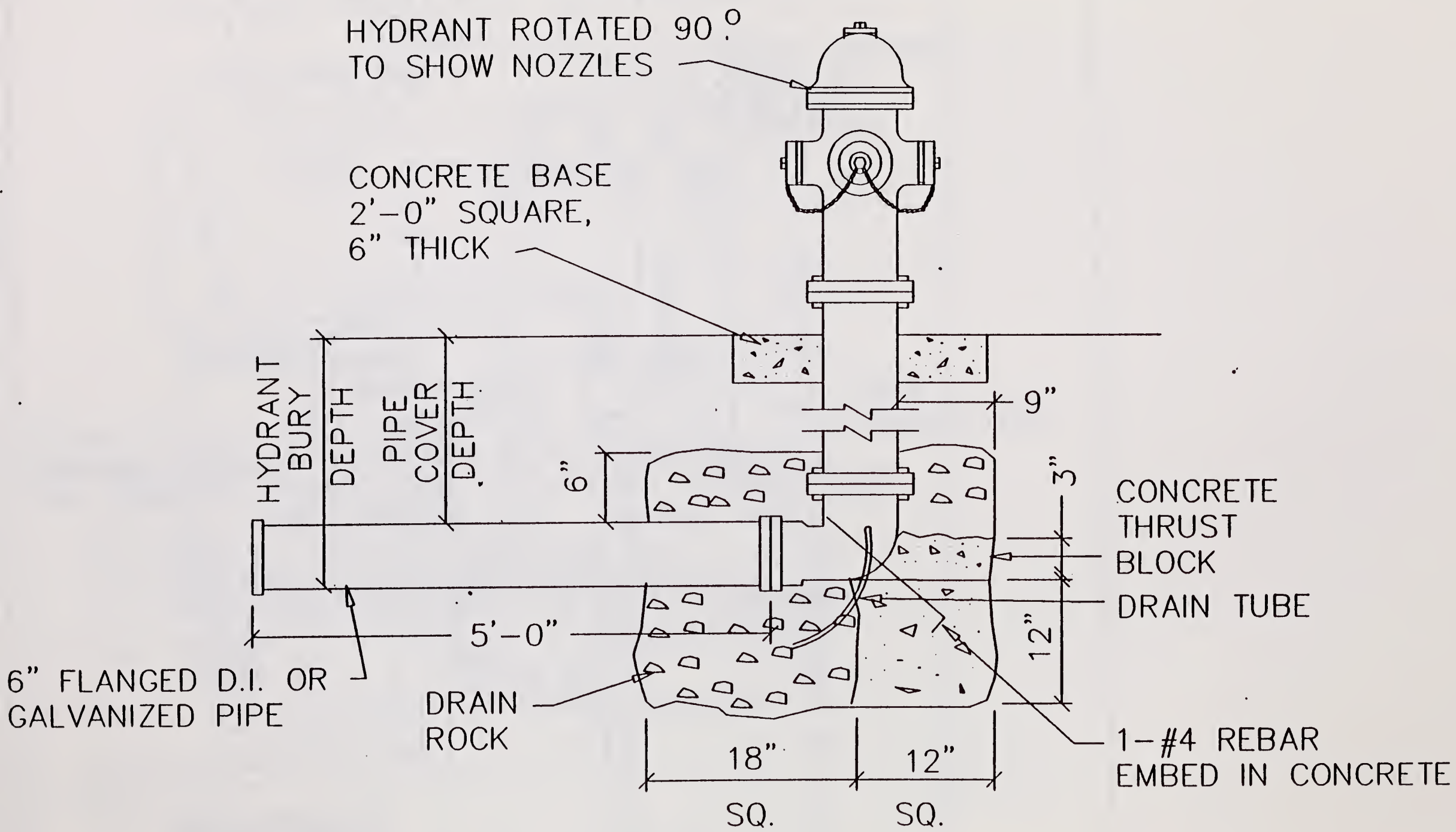
2/29/88



1 1/2" FIRE HYDRANT

NO SCALE

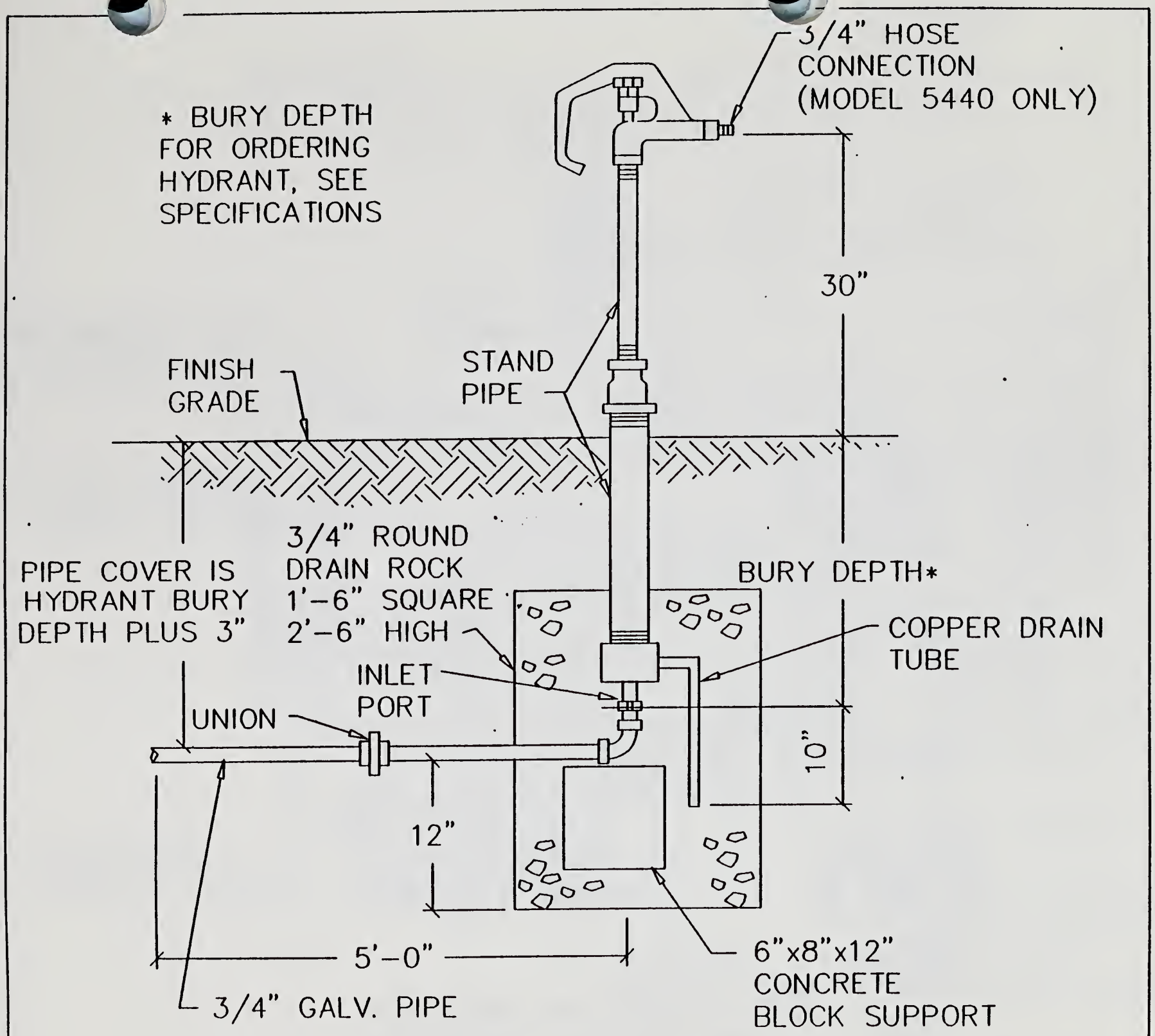
51-29
2/29/88



4 1/2" FIRE HYDRANT

NO SCALE

51-30
2/29/88

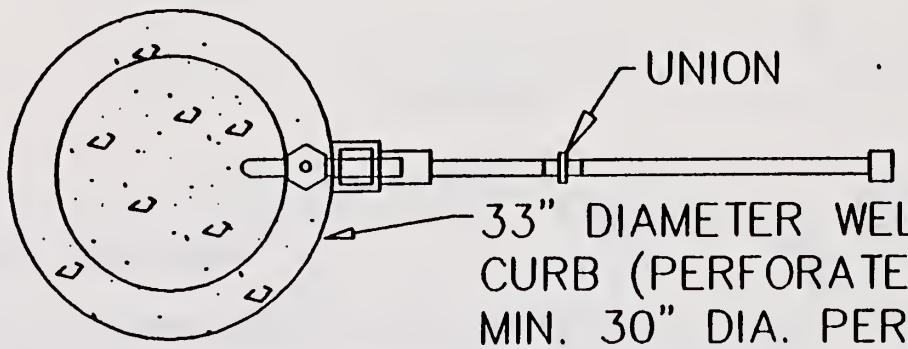


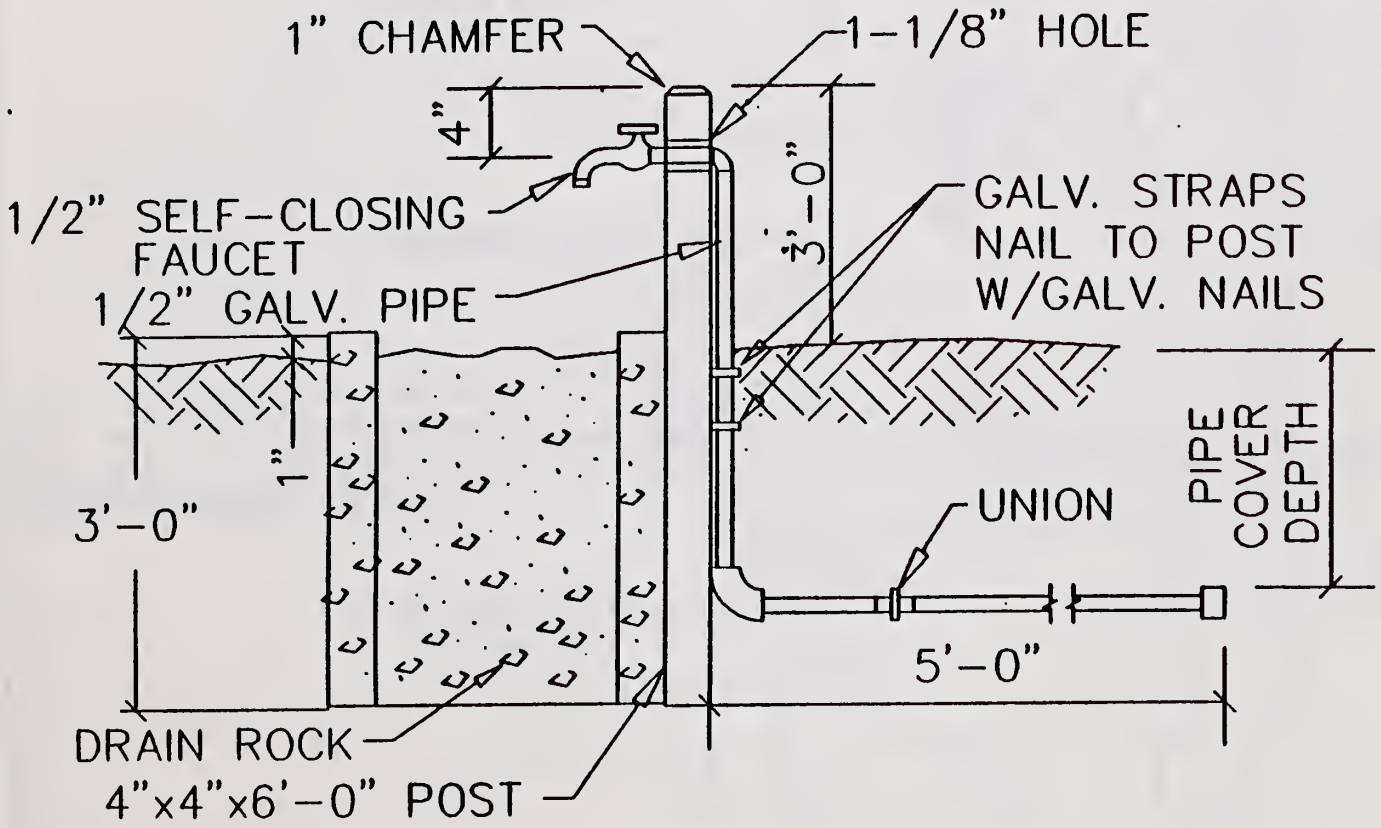
FROST-PROOF HYDRANT

NO SCALE

51-31

2/29/88

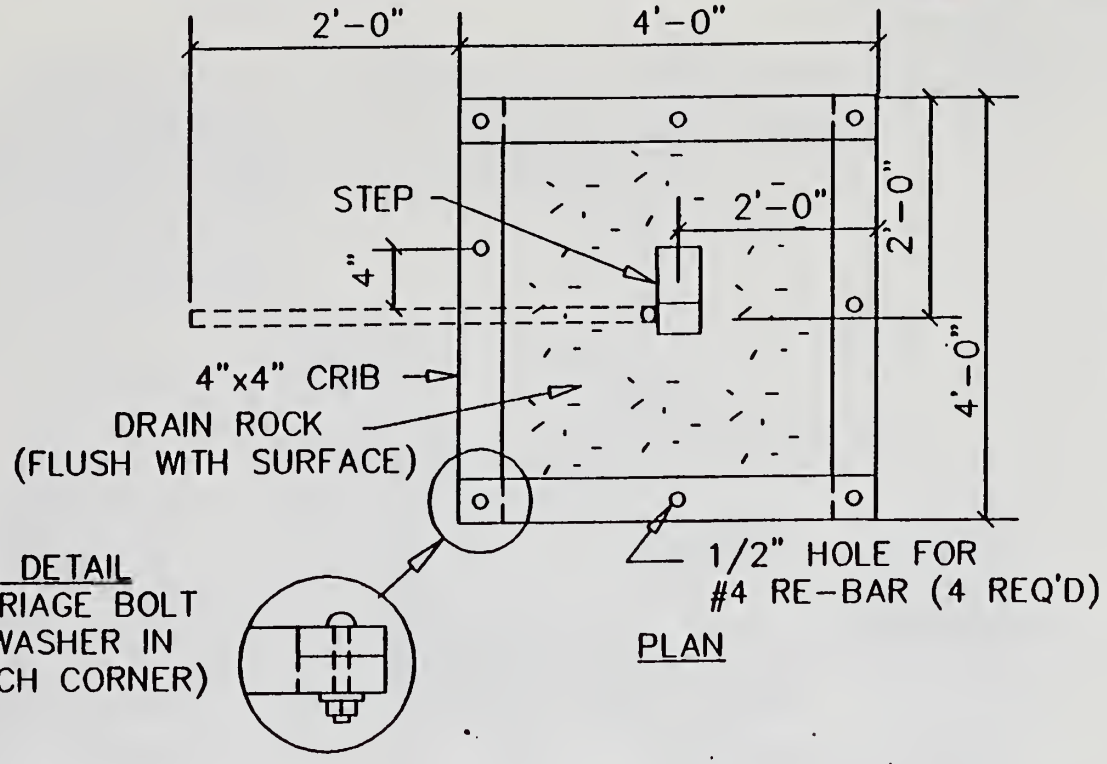




POST HYDRANT WITH SUMP

51-32
2/29/88

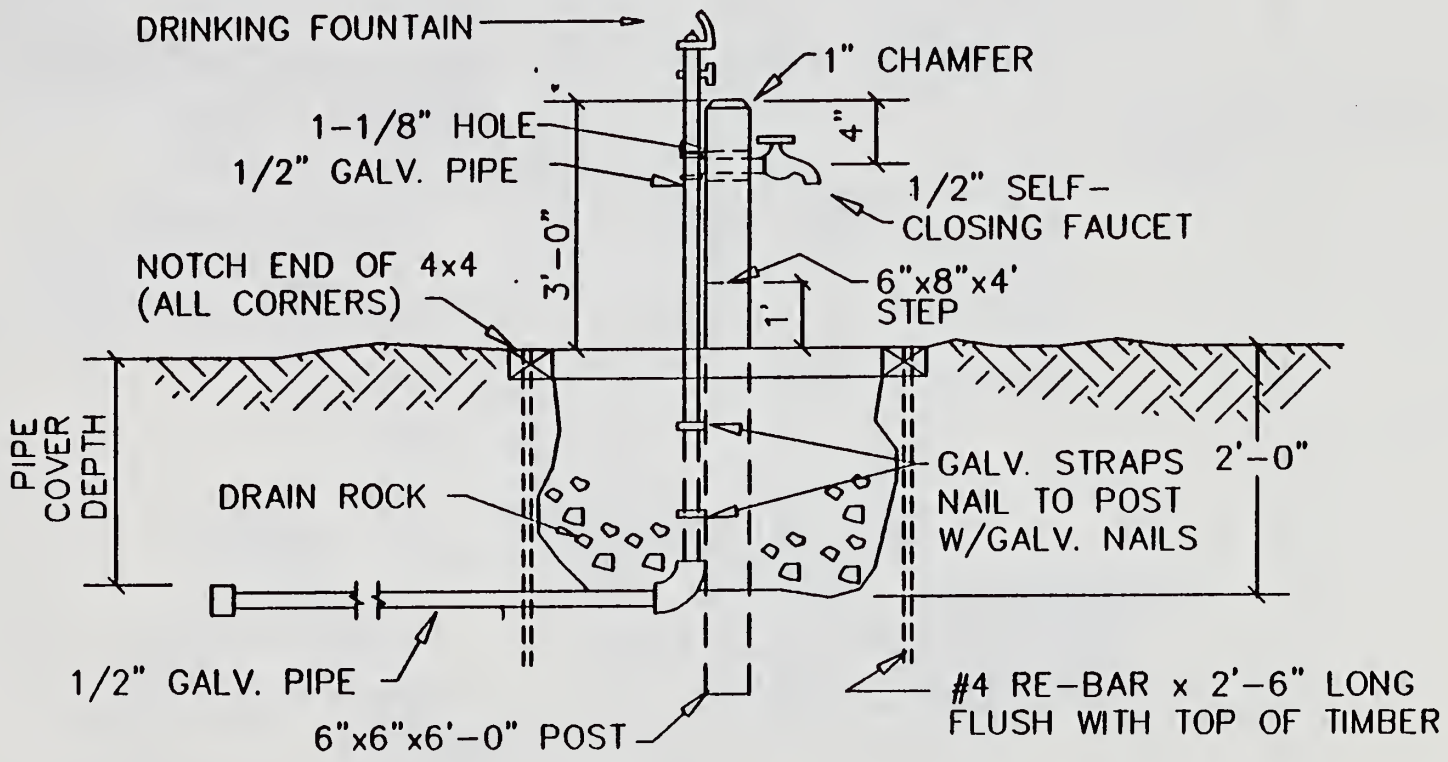
NO SCALE



PLAN

NOTE:
HYDRANT AND
DRINKING FOUNTAIN
OMITTED THIS
VIEW FOR CLARITY.

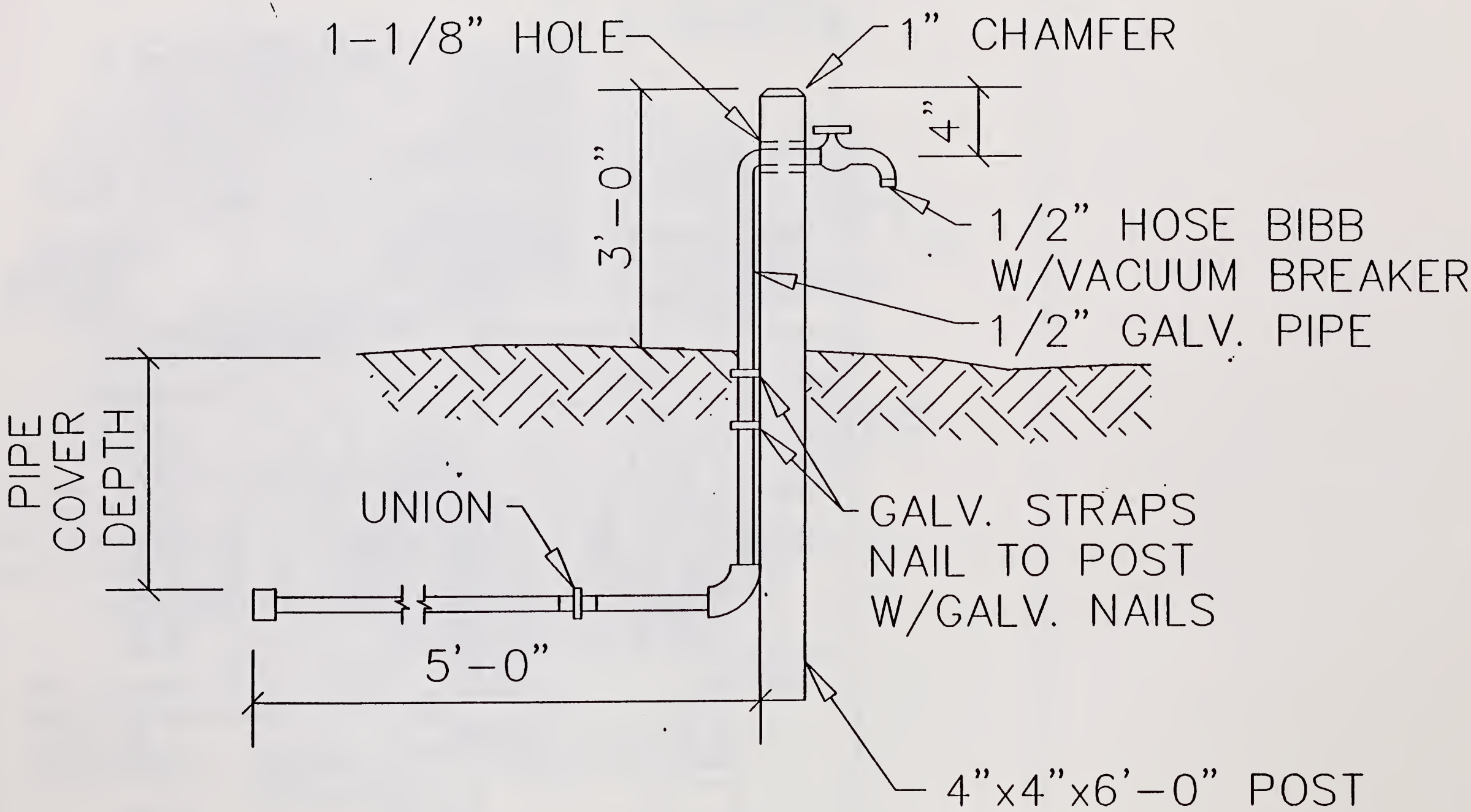
TYPICAL CORNER DETAIL
3/8" GALV. CARRIAGE BOLT
NUT AND FLAT WASHER IN
7/16" HOLE (EACH CORNER)



SECTION

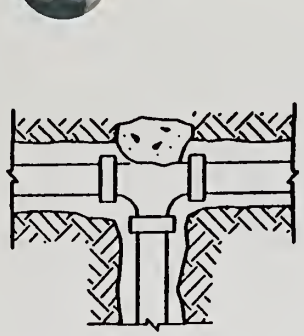
POST HYDRANT-
DRINKING FOUNTAIN

51-33
2/29/88

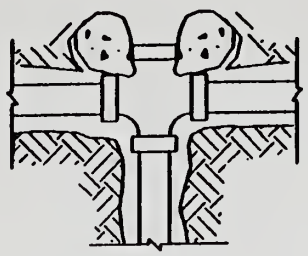


POST FAUCET

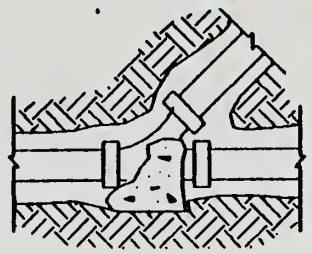
2/29/88 51-34



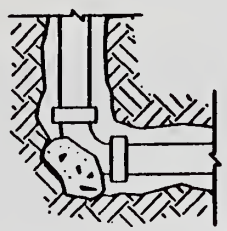
T-1



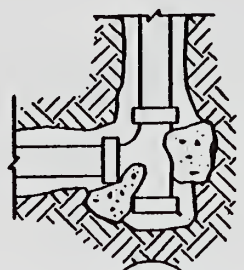
T-2



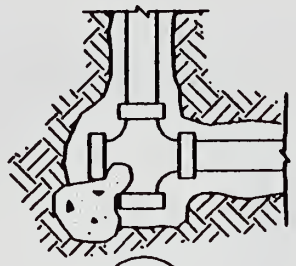
T-3



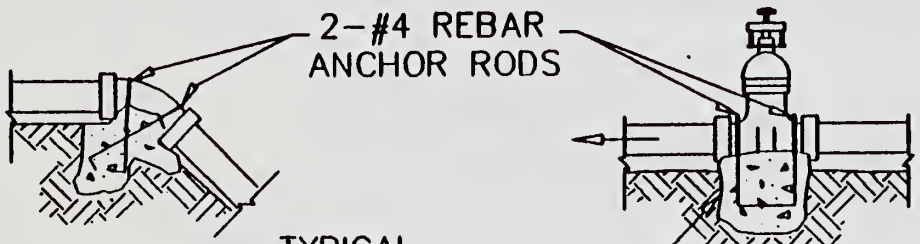
T-4

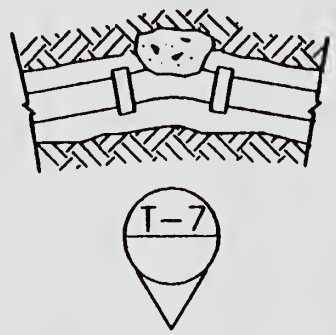


T-5



T-6

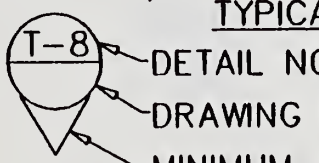




THRUST AREA

T-9

T-7



TYPICAL

T-8

DETAIL NO.

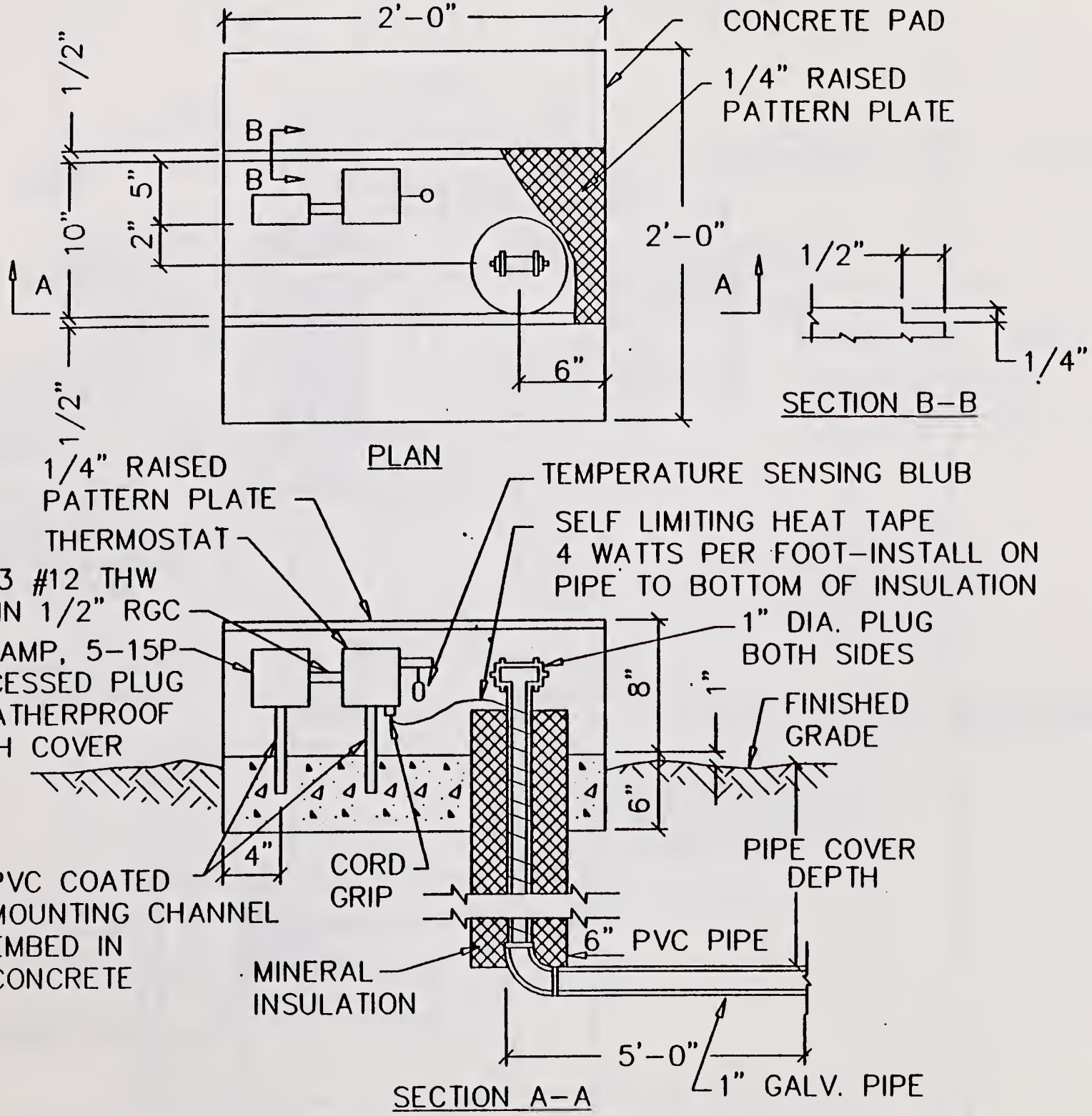
DRAWING NO.

MINIMUM AREA OF THRUST BLOCKS AGAINST UNDISTURBED SOIL IN SQUARE FEET

CONCRETE THRUST BLOCKS AND PIPE ANCHORS

51-35

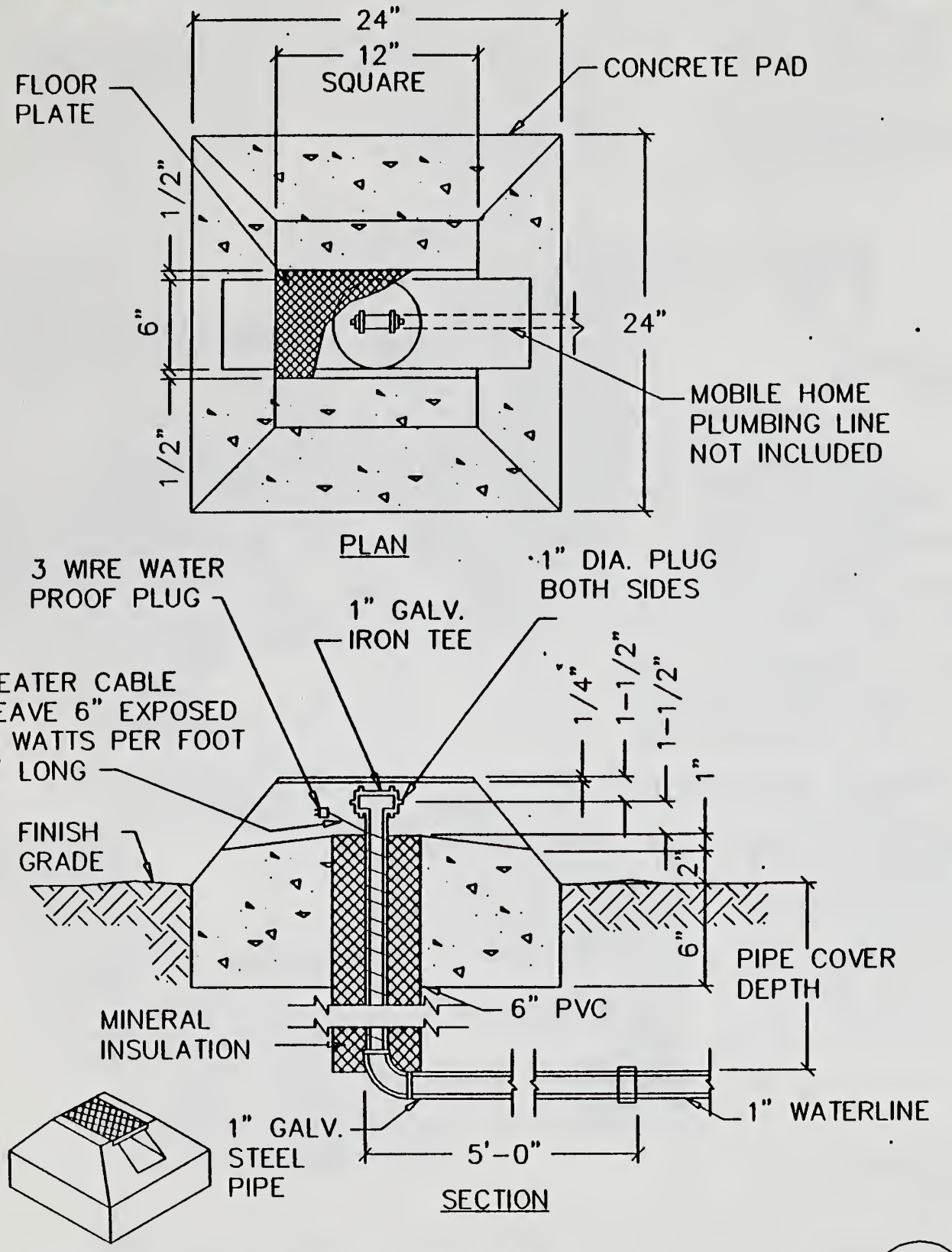
2/29/88



MOBILE HOME WATER HOOKUP WITH THERMOSTAT

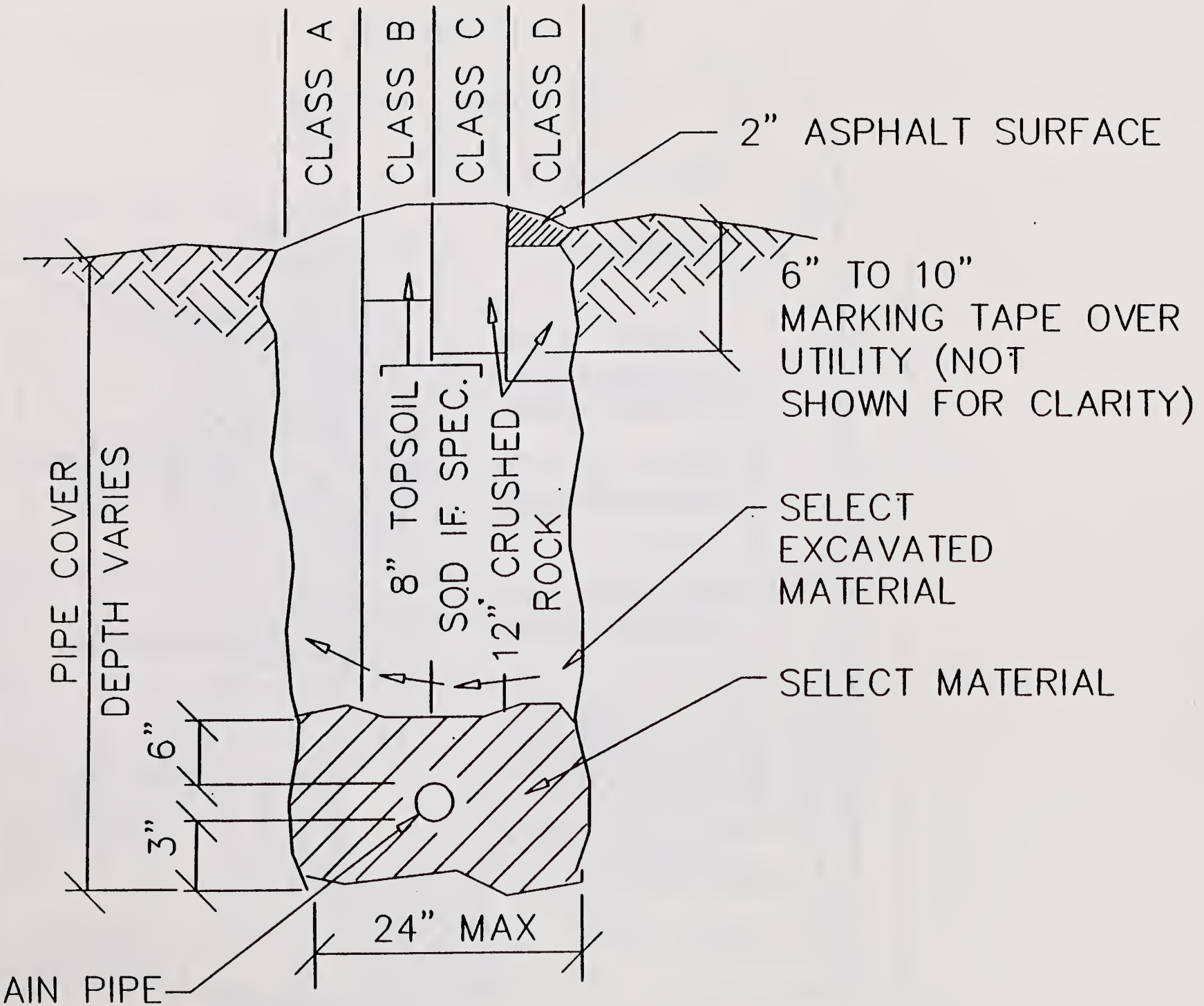
51-36

9/88



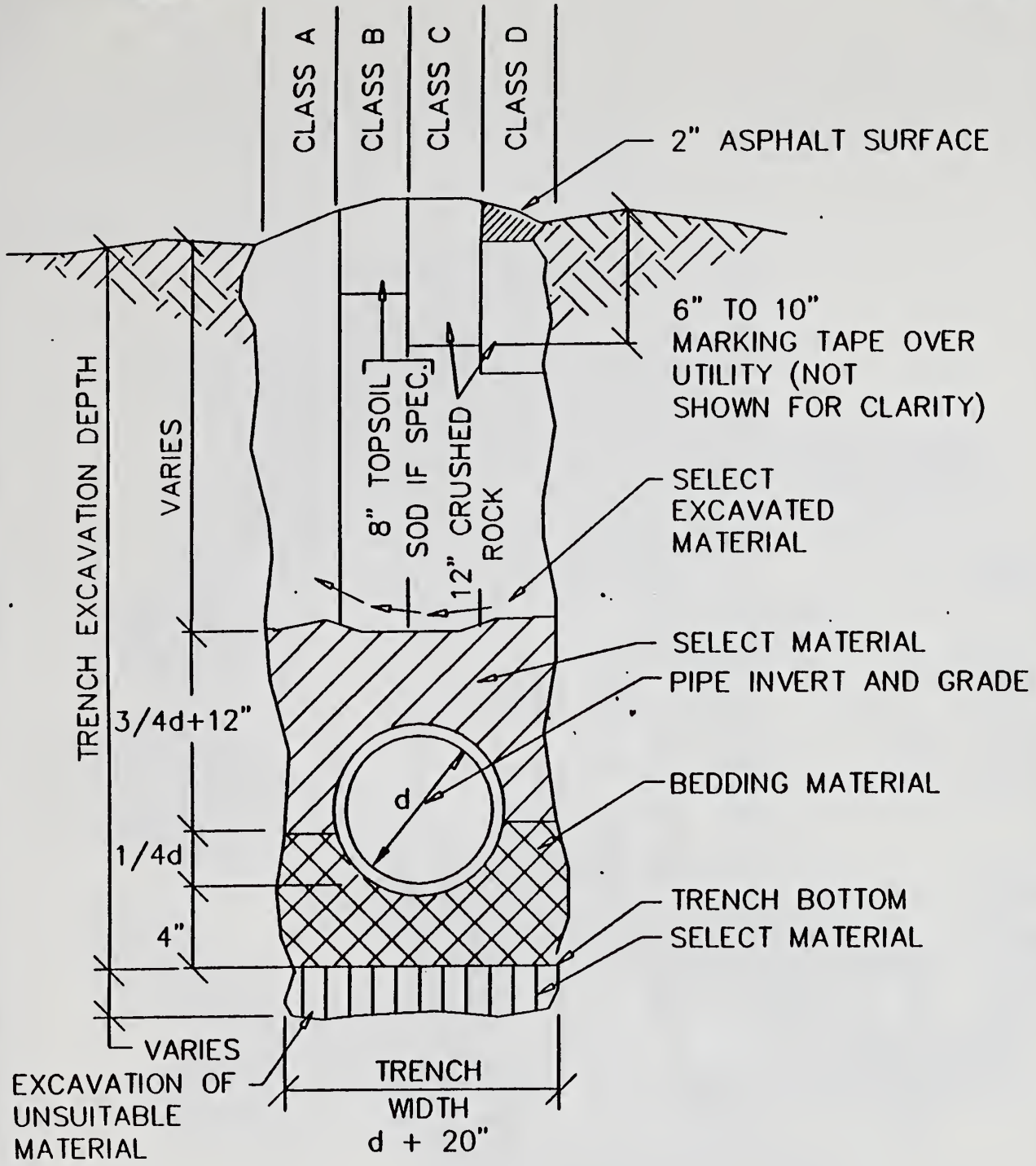
MOBILE HOME WATER HOOKUP WITHOUT THERMOSTAT

51-37
2/29/88



DRAIN LINE TRENCH

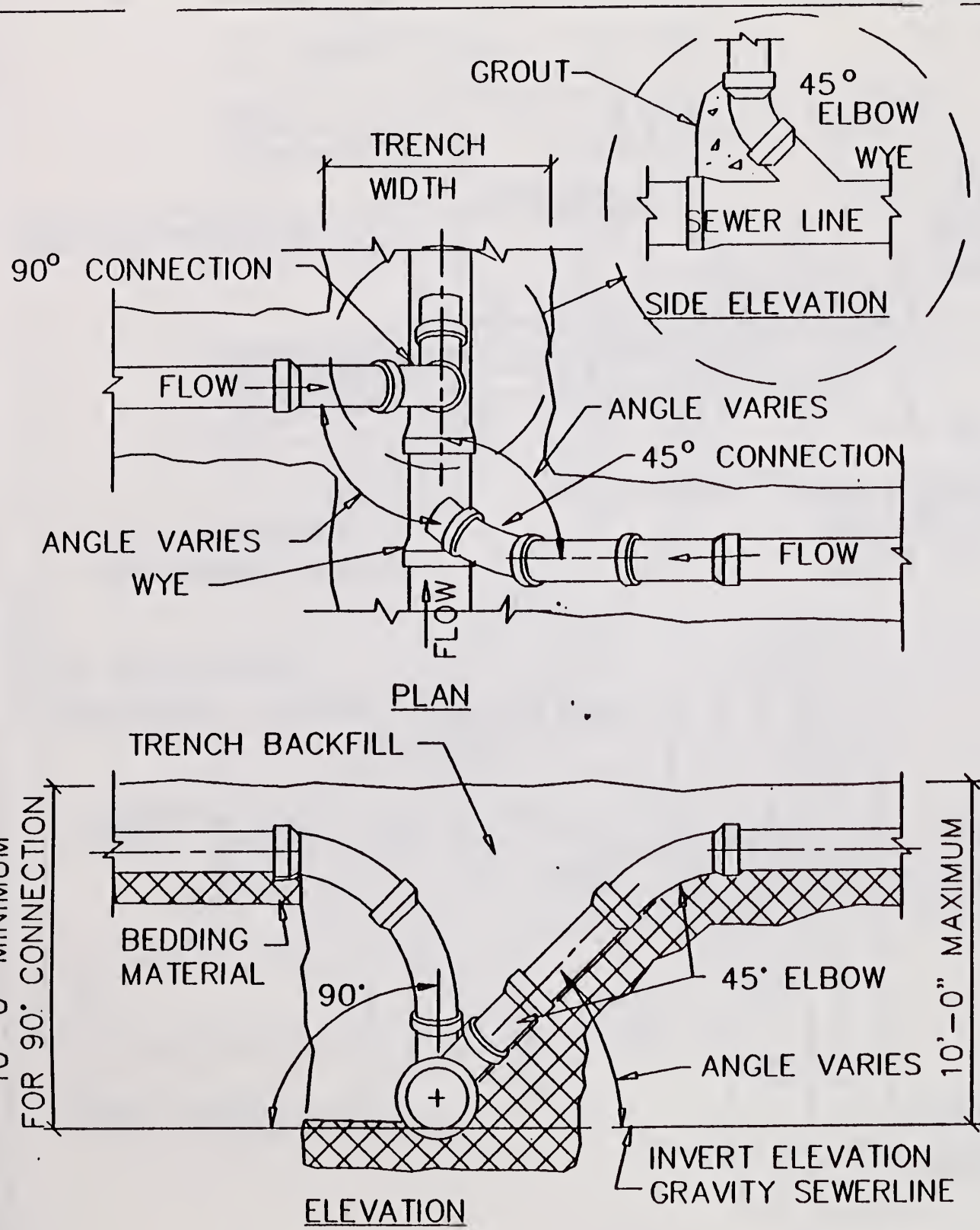
51-38
2/29/88



d = NOMINAL DIA.

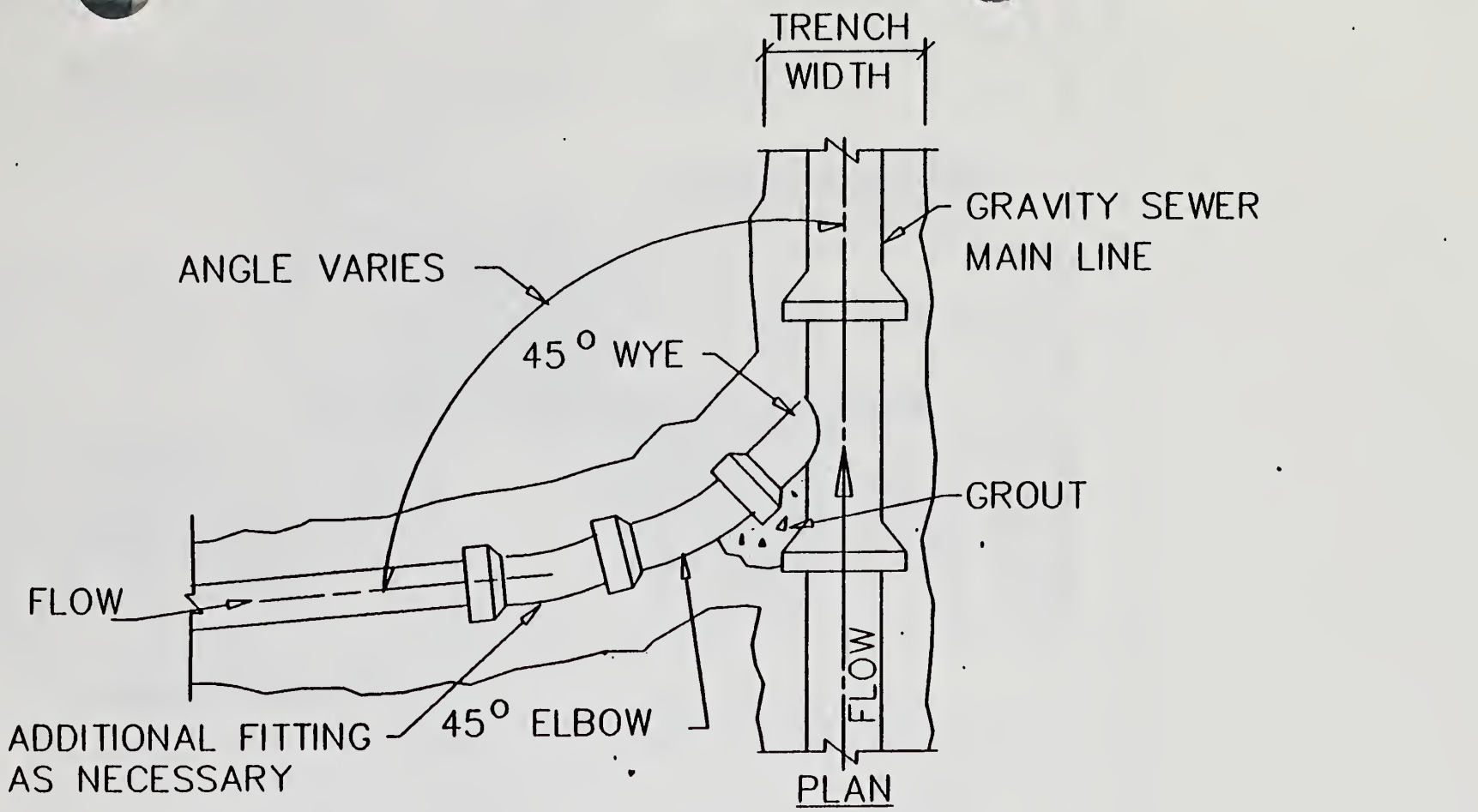
SEWERLINE TRENCH

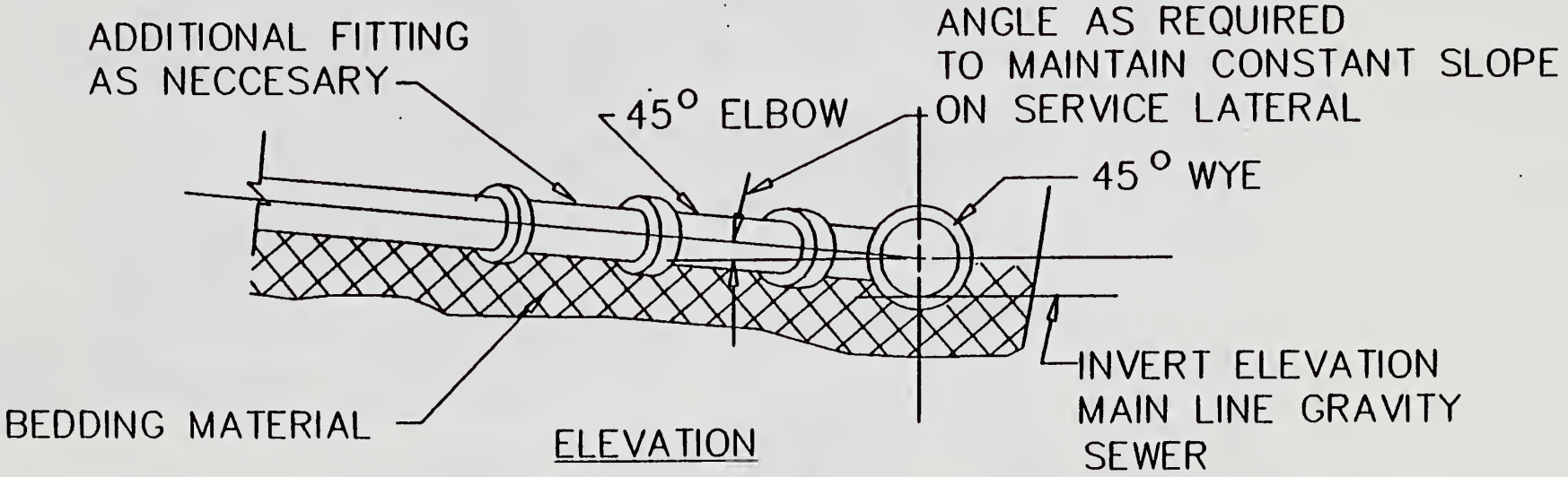
51-41
2/29/88



SERVICE CONNECTION
DEEP SEWER

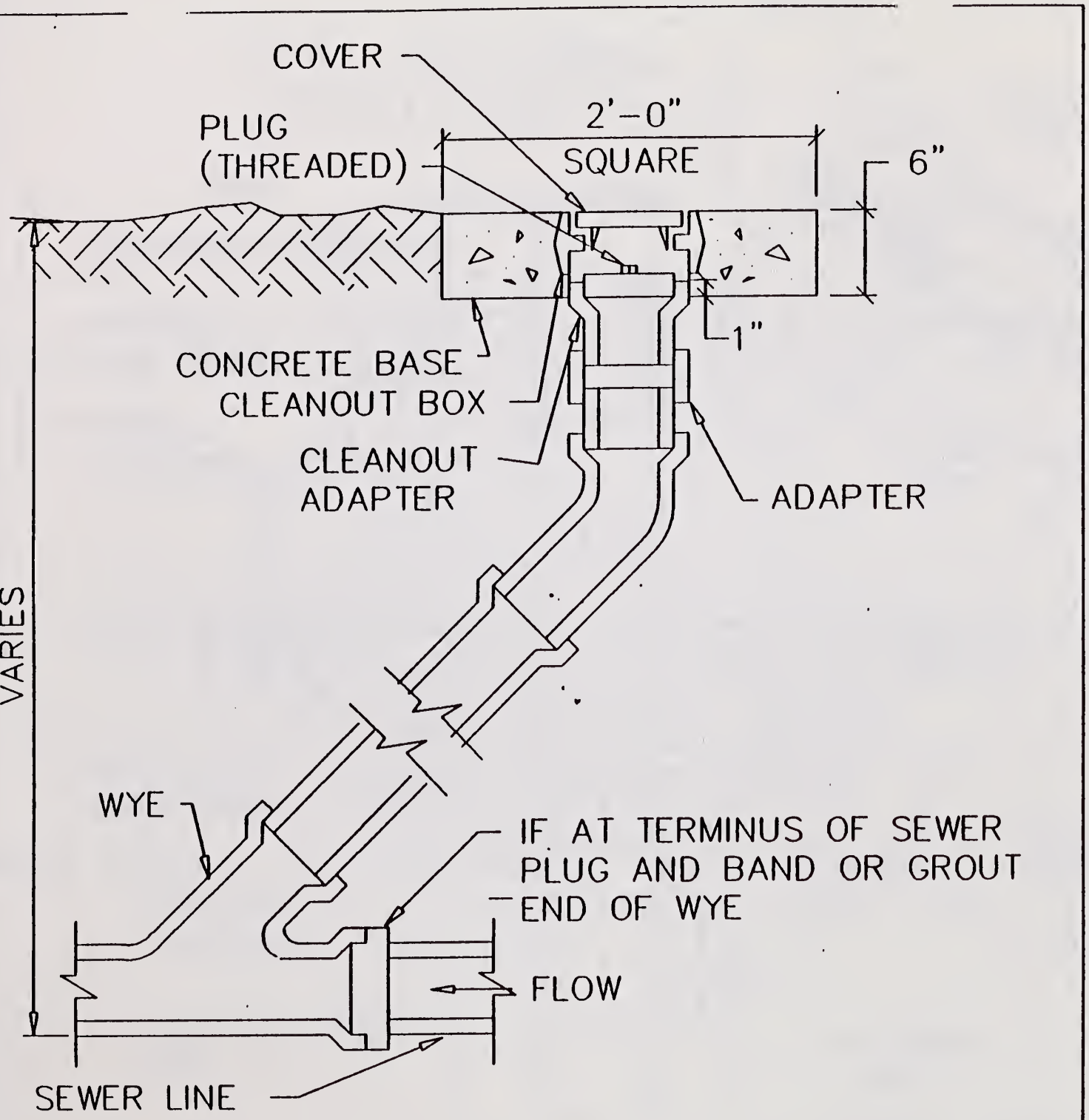
51-42
2/29/88





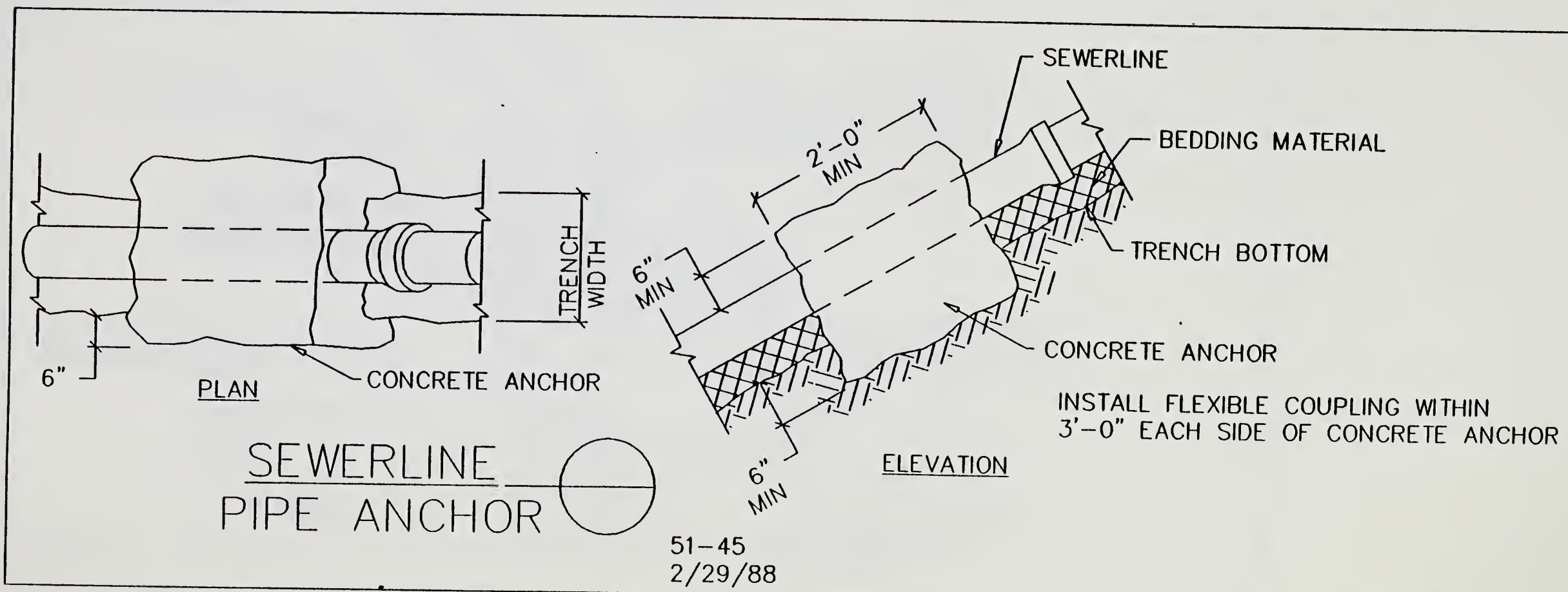
SERVICE CONNECTION
SHALLOW SEWER

51-43
2/29/88



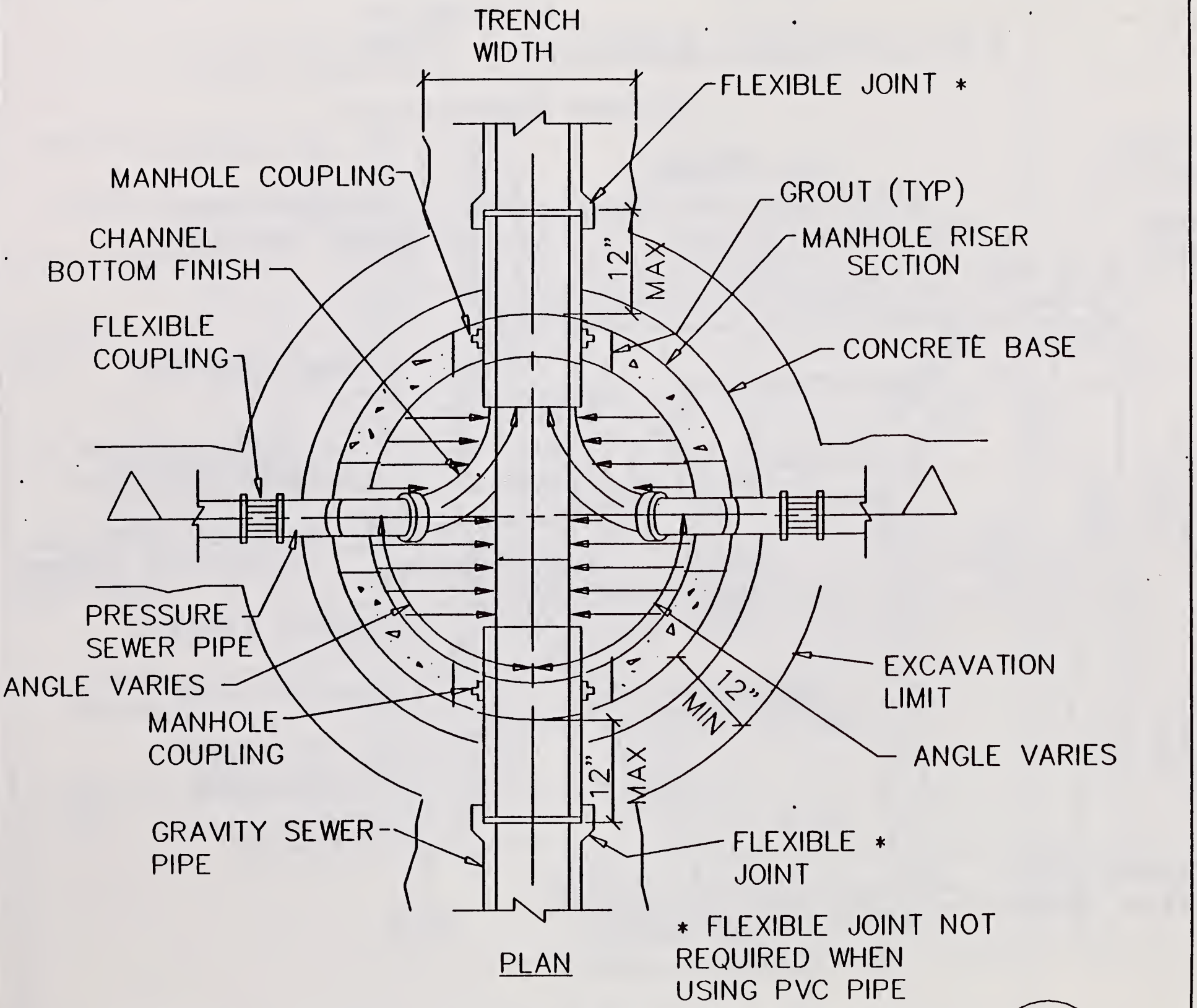
CLEANOUT

2/29/88 51-44



SEWERLINE PIPE ANCHOR

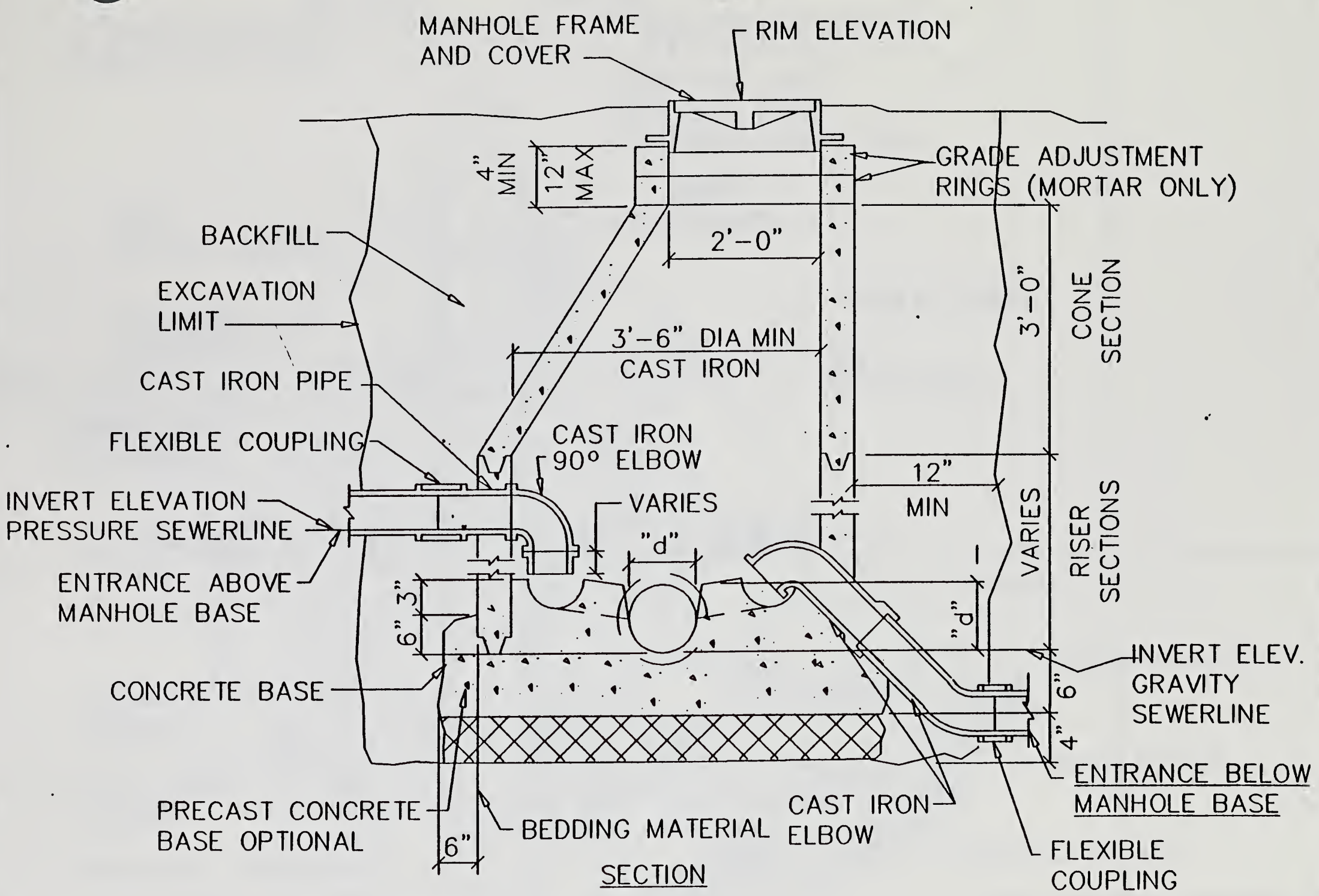
51-45
2/29/88



* FLEXIBLE JOINT NOT REQUIRED WHEN USING PVC PIPE

PRESSURE–GRAVITY MANHOLE

NO SCALE 2/29/88 [illegible]-46



SECTION

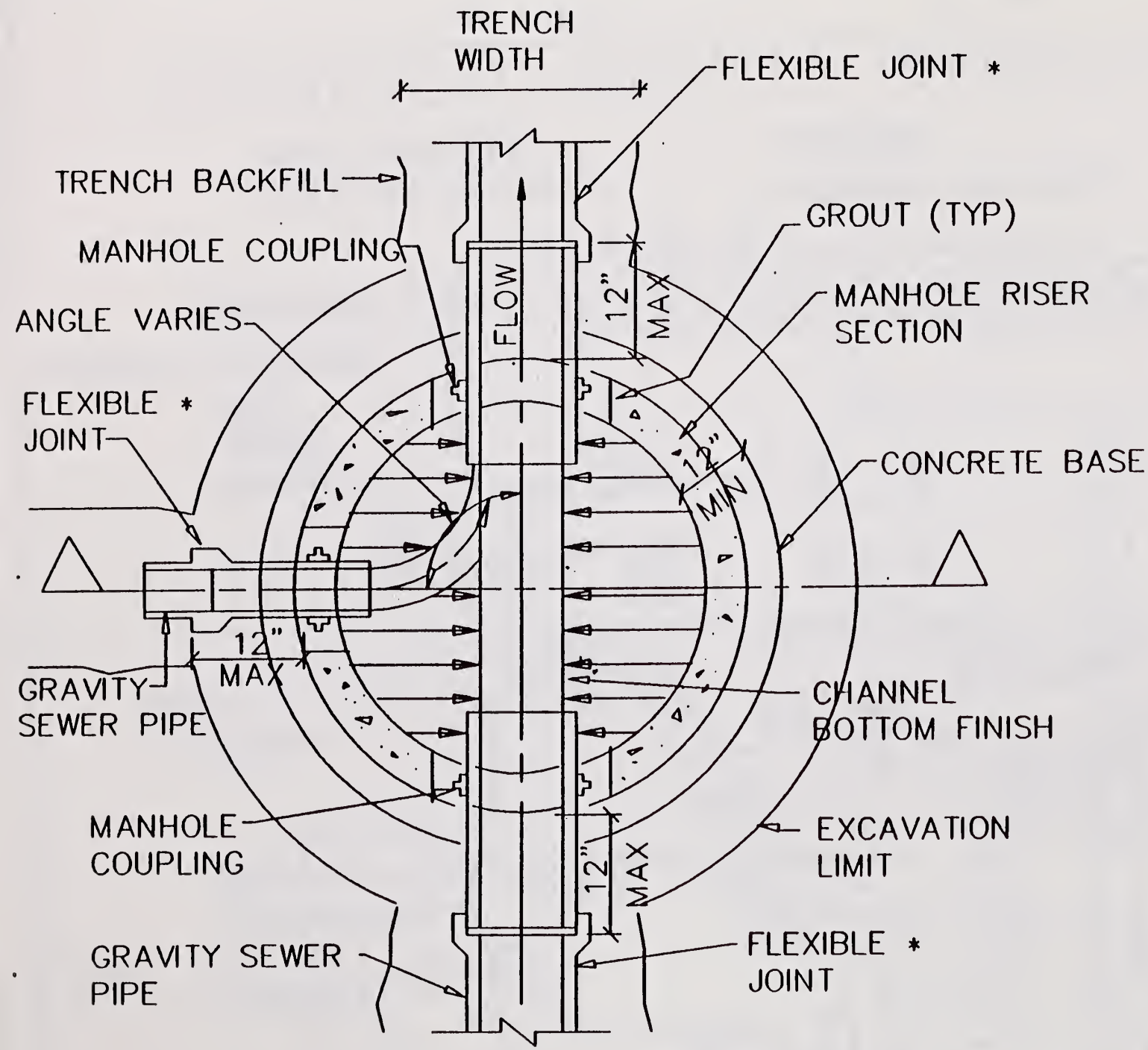
"d" = NOMINAL DIAMETER

PRESSURE-GRAVITY MANHOLE

NO SCALE

51-47

2/29/88



PLAN

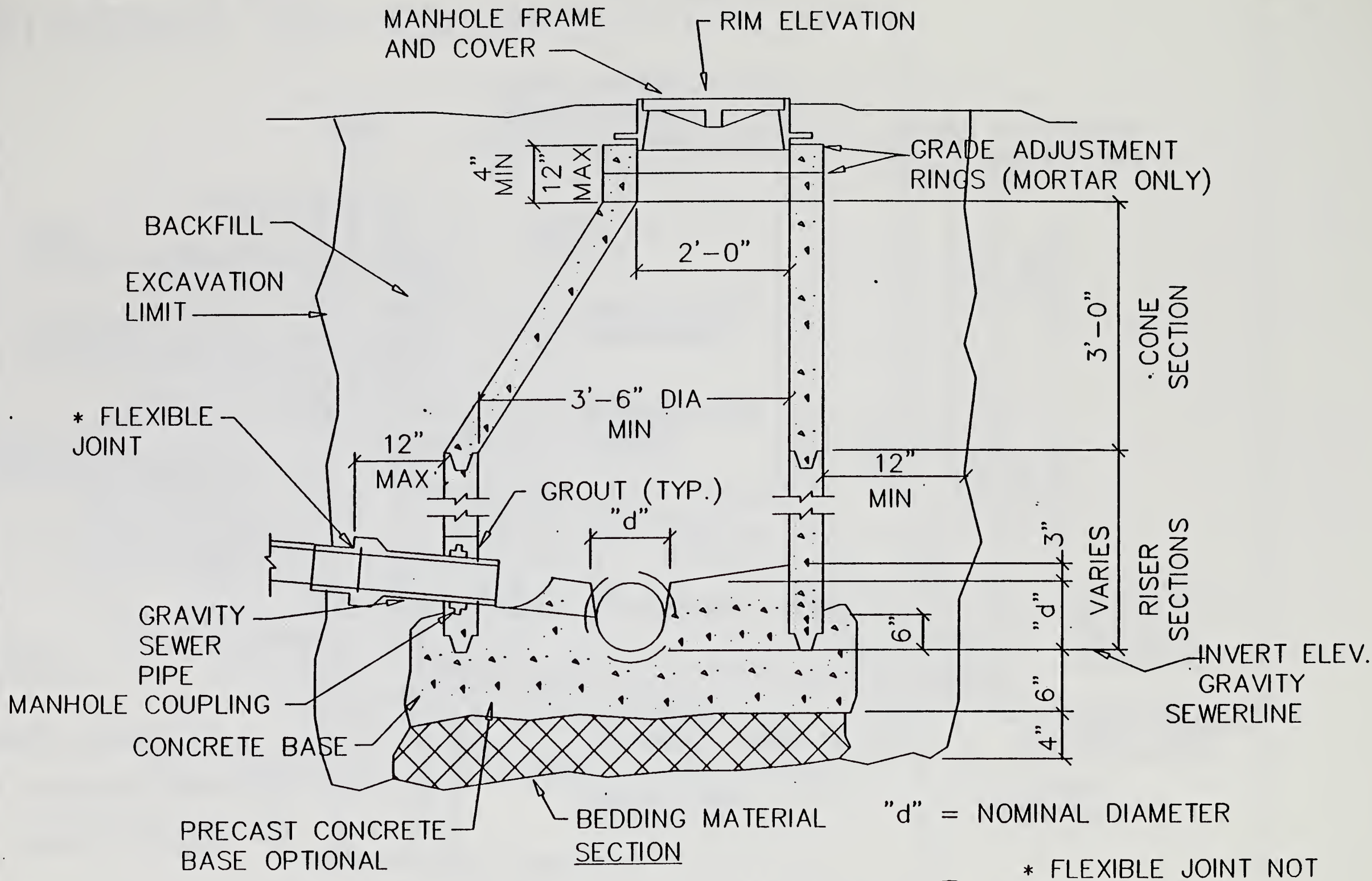
* FLEXIBLE JOINT NOT REQUIRED WHEN USING PVC PIPE

STANDARD GRAVITY MANHOLE

NO SCALE

51-48

2/29/8



SECTION

"d" = NOMINAL DIAMETER

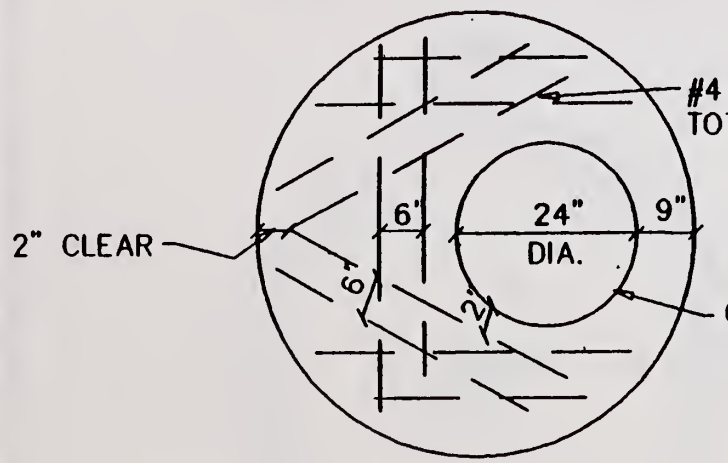
STANDARD GRAVITY MANHOLE

NO SCALE

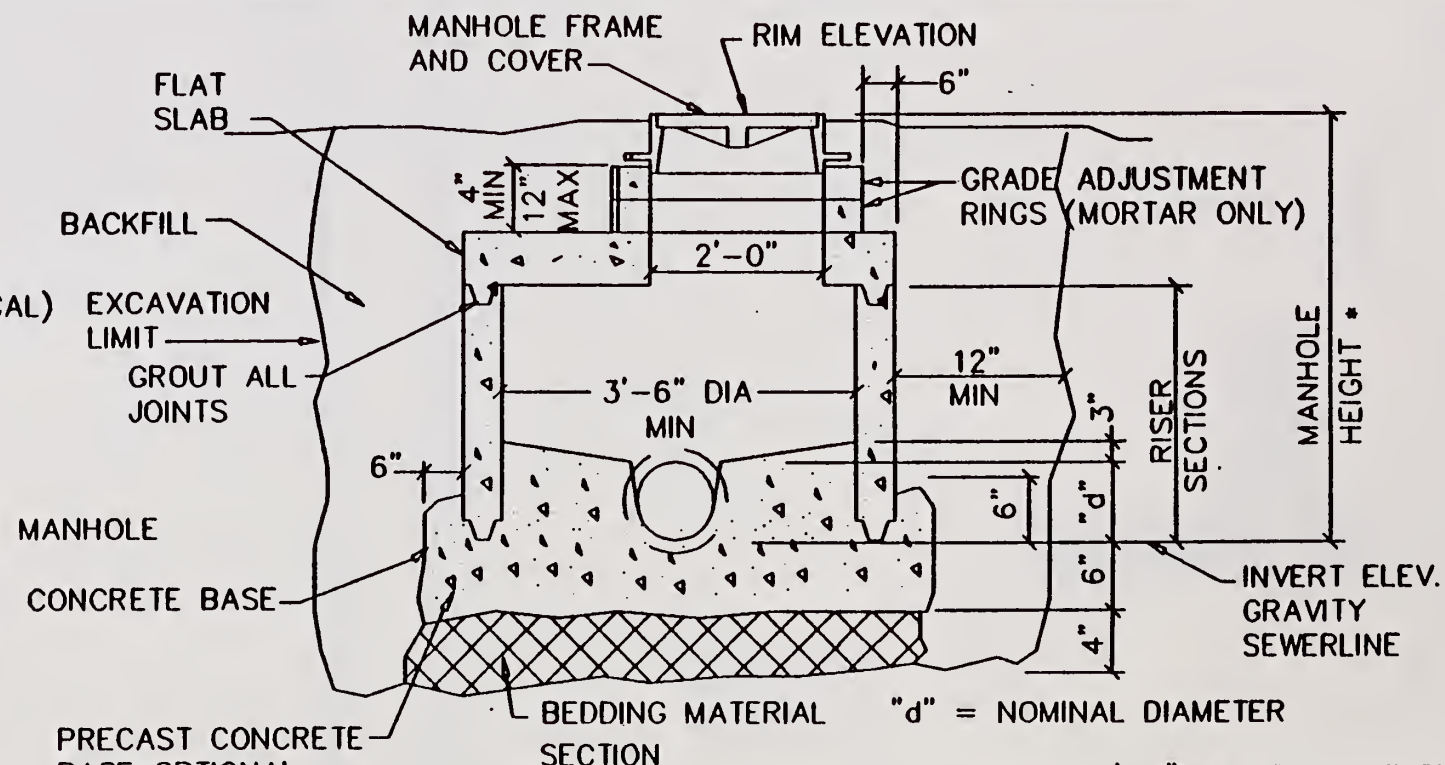
51-49

2/29/88

* FLEXIBLE JOINT NOT REQUIRED WHEN USING PVC PIPE



PRECAST CONCRETE
FLAT SLAB
NO SCALE



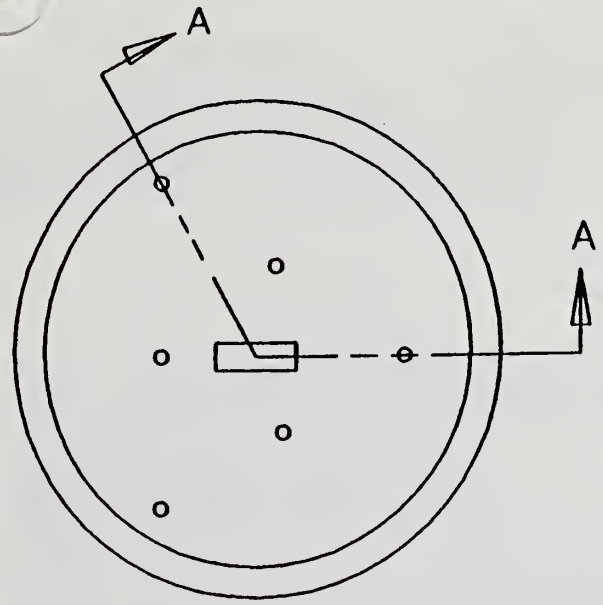
SECTION

FLAT SLAB MANHOLE

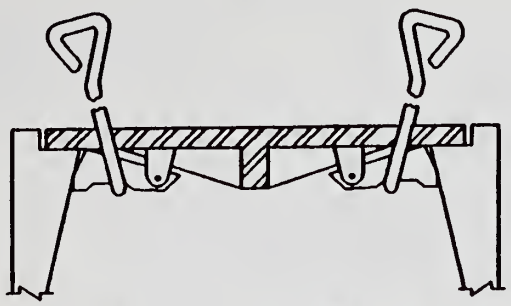
NO SCALE

51-50
2/29/88

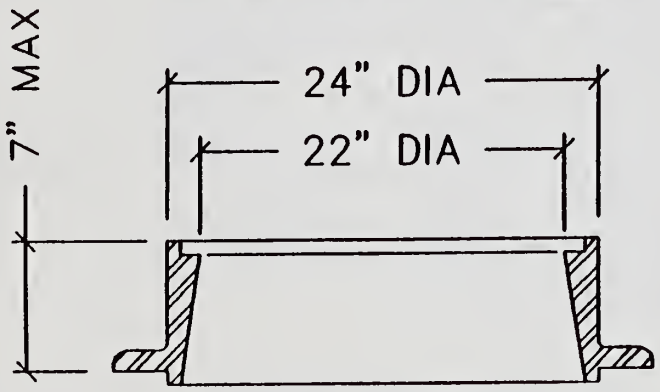
* 5'-0" OR LESS USE FLAT SLAB MANHOLE, OVER 5'-0" USE STANDARD MANHOLE



PLAN



COVER SECTION A–A

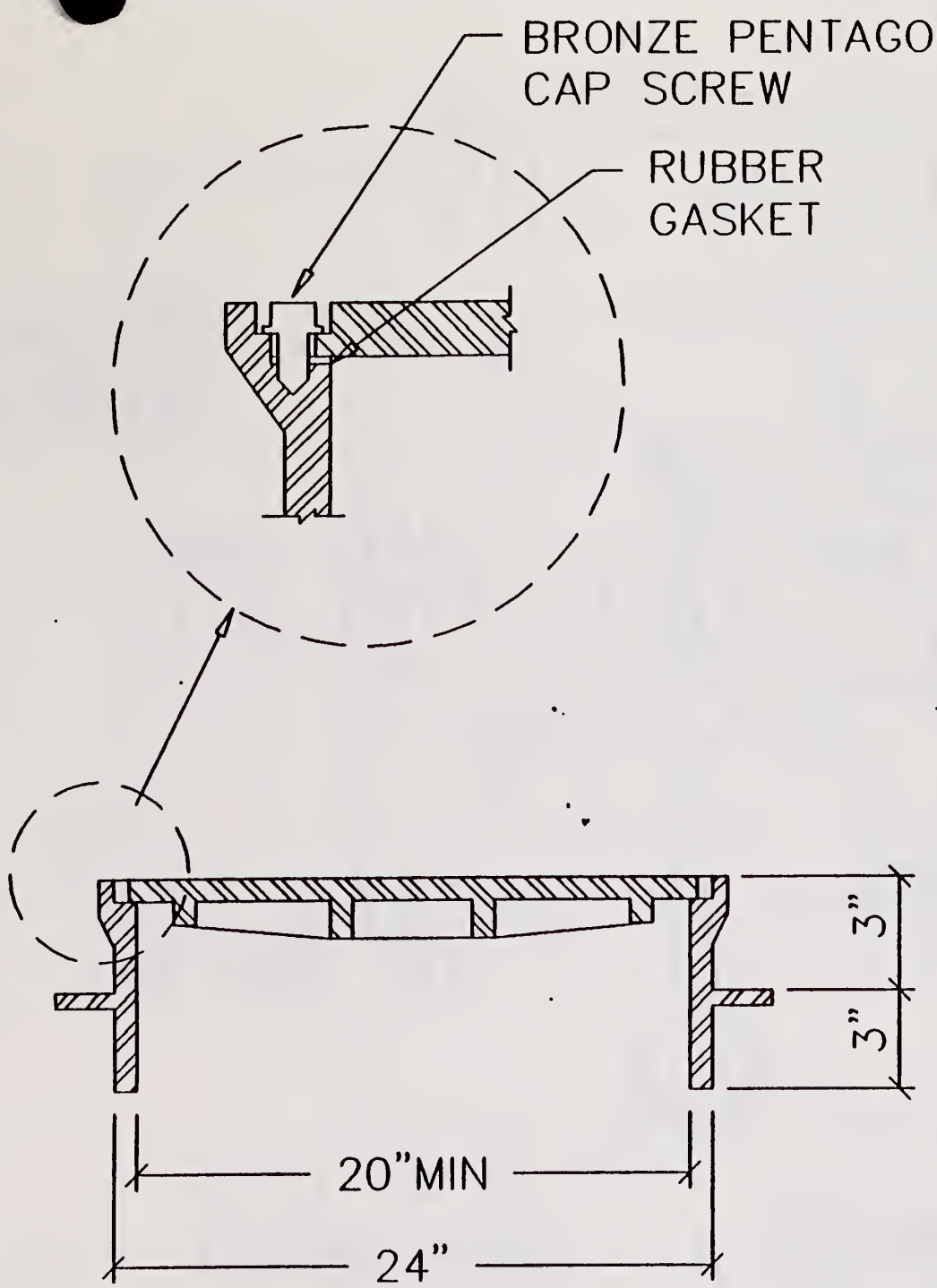


FRAME SECTION

LOCKING M.H. FRAME AND COVER

NO SCALE

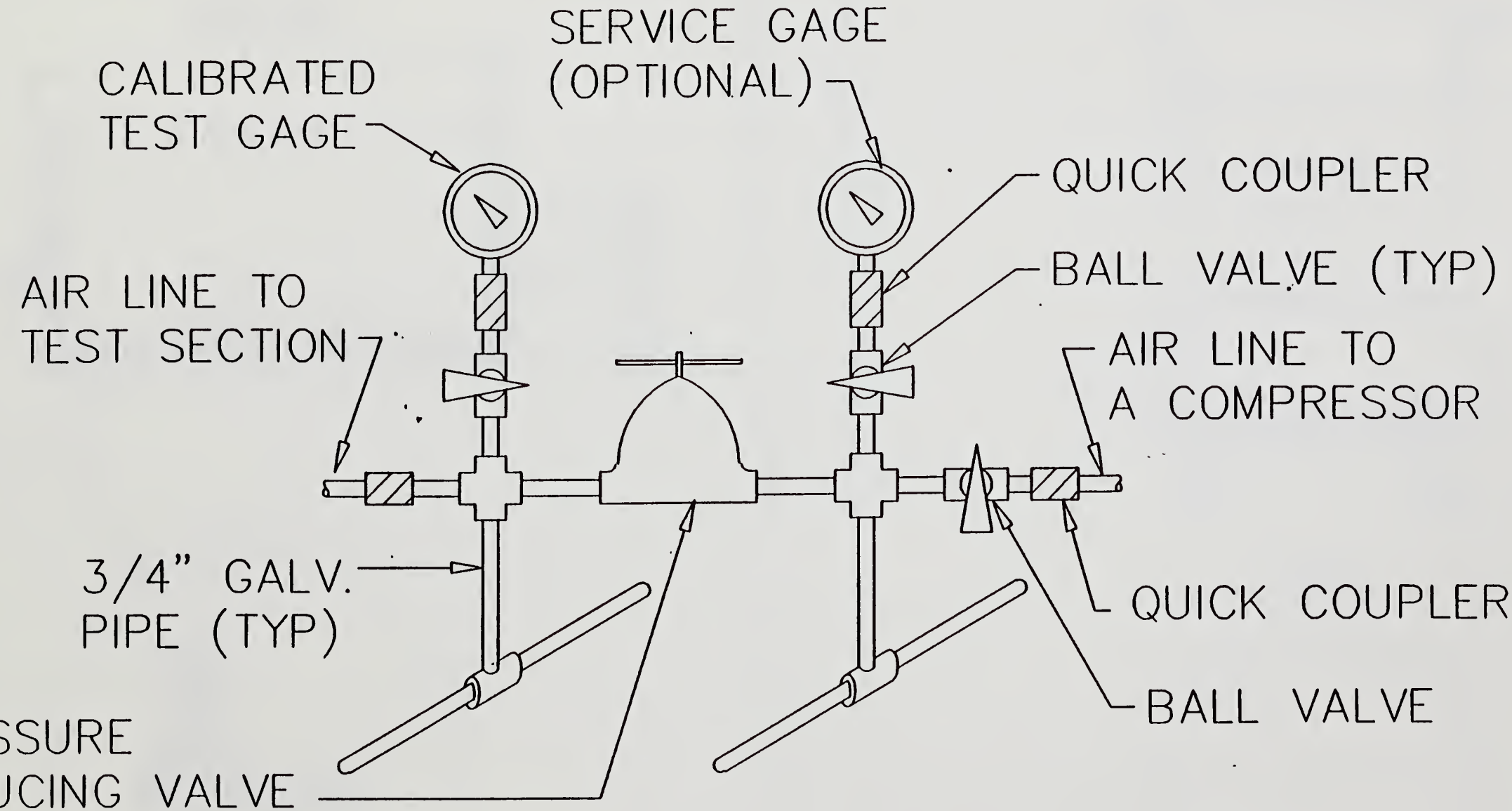
51–51
2/29/88



SECTION

WATERTIGHT M.H. FRAME AND COVER

NO SCALE 51-52 2/29/88

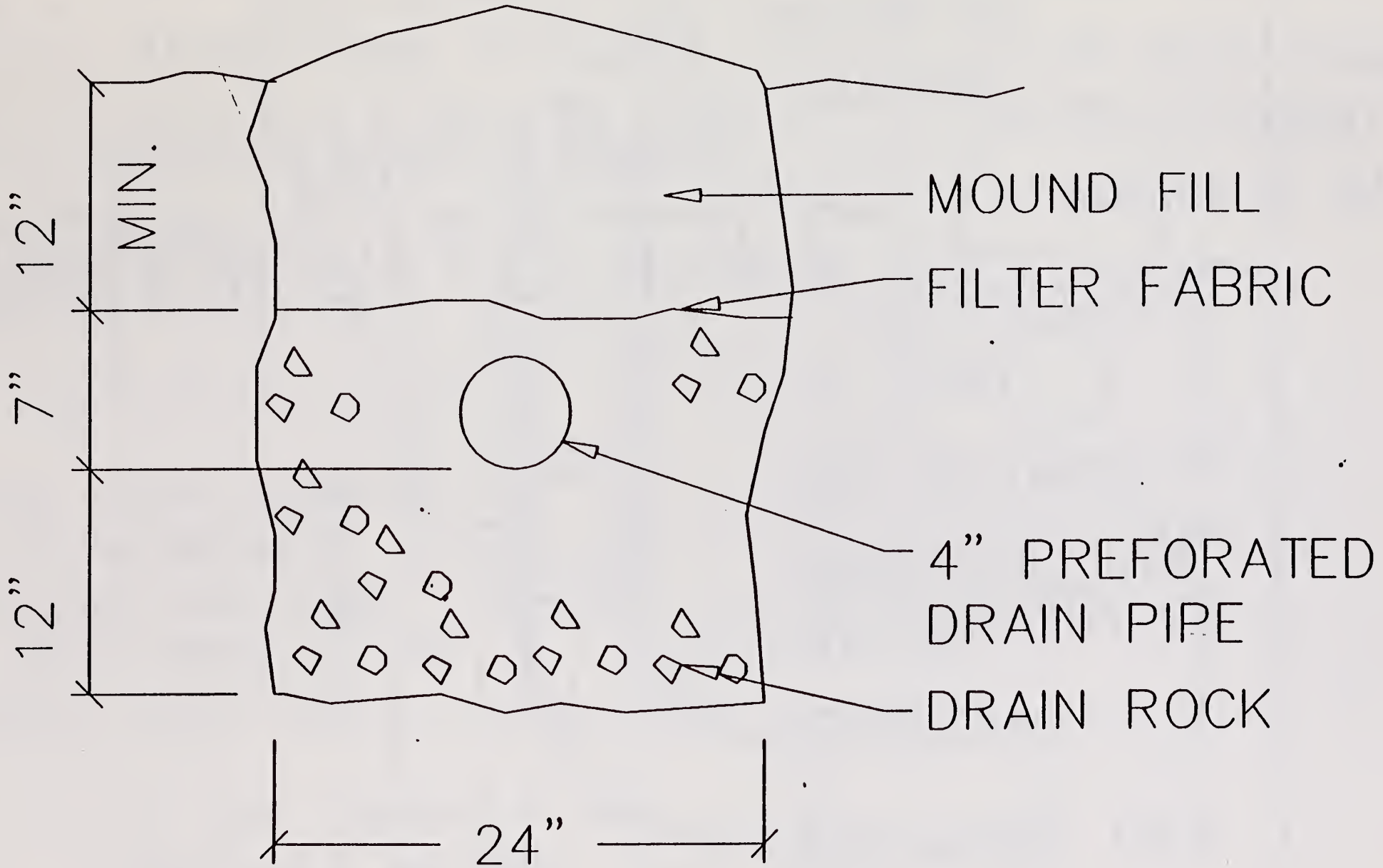


AIR TEST STAND

NO SCALE

51-53

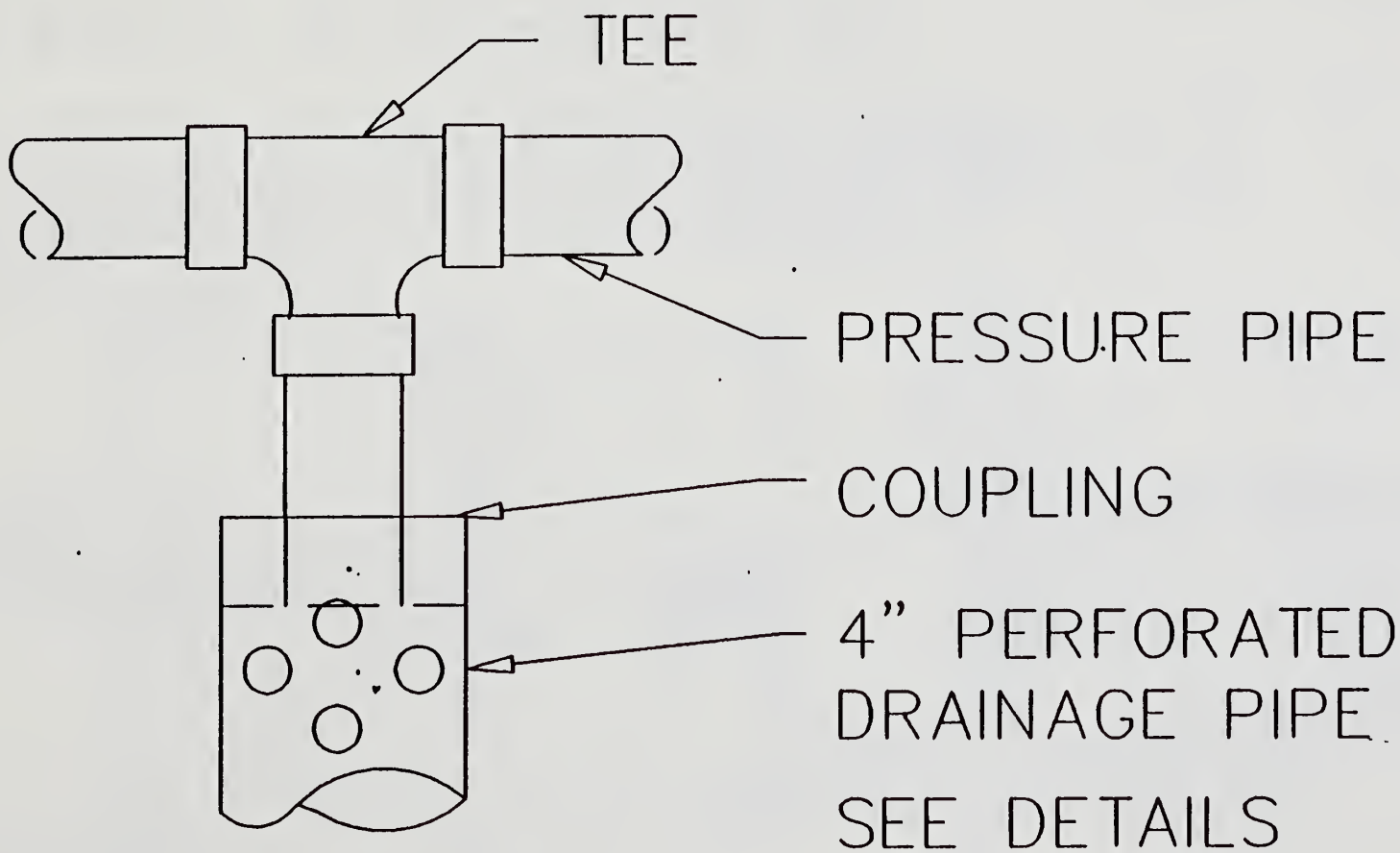
2/29/88



ABSORPTION—TRENCH AND LATERAL

NO SCALE

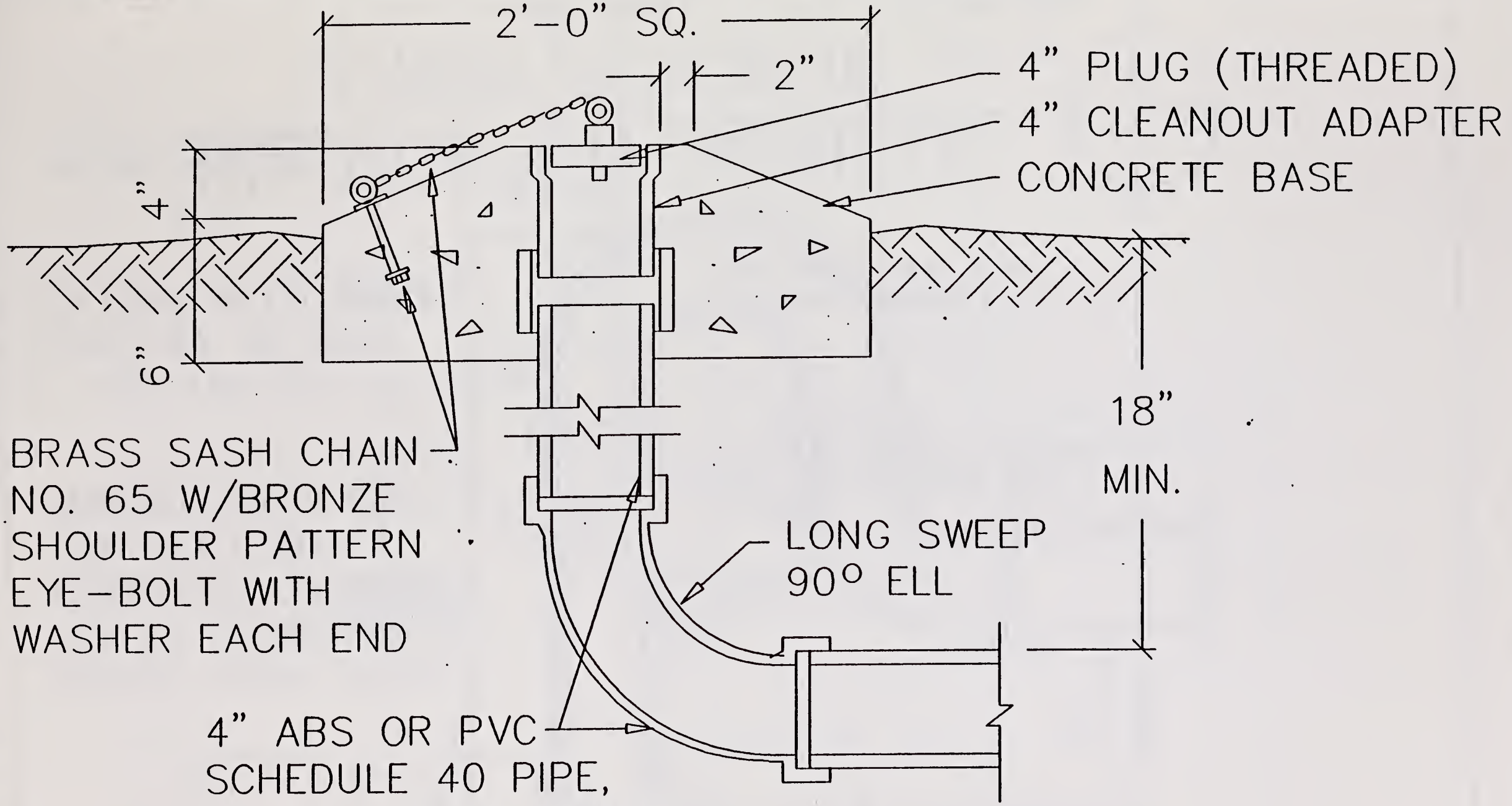
51-54
2/29/88



DRAINFIELD PIPE TRANSITION

(PRESSURE SYSTEM)
NO SCALE

51-55
2/29/88

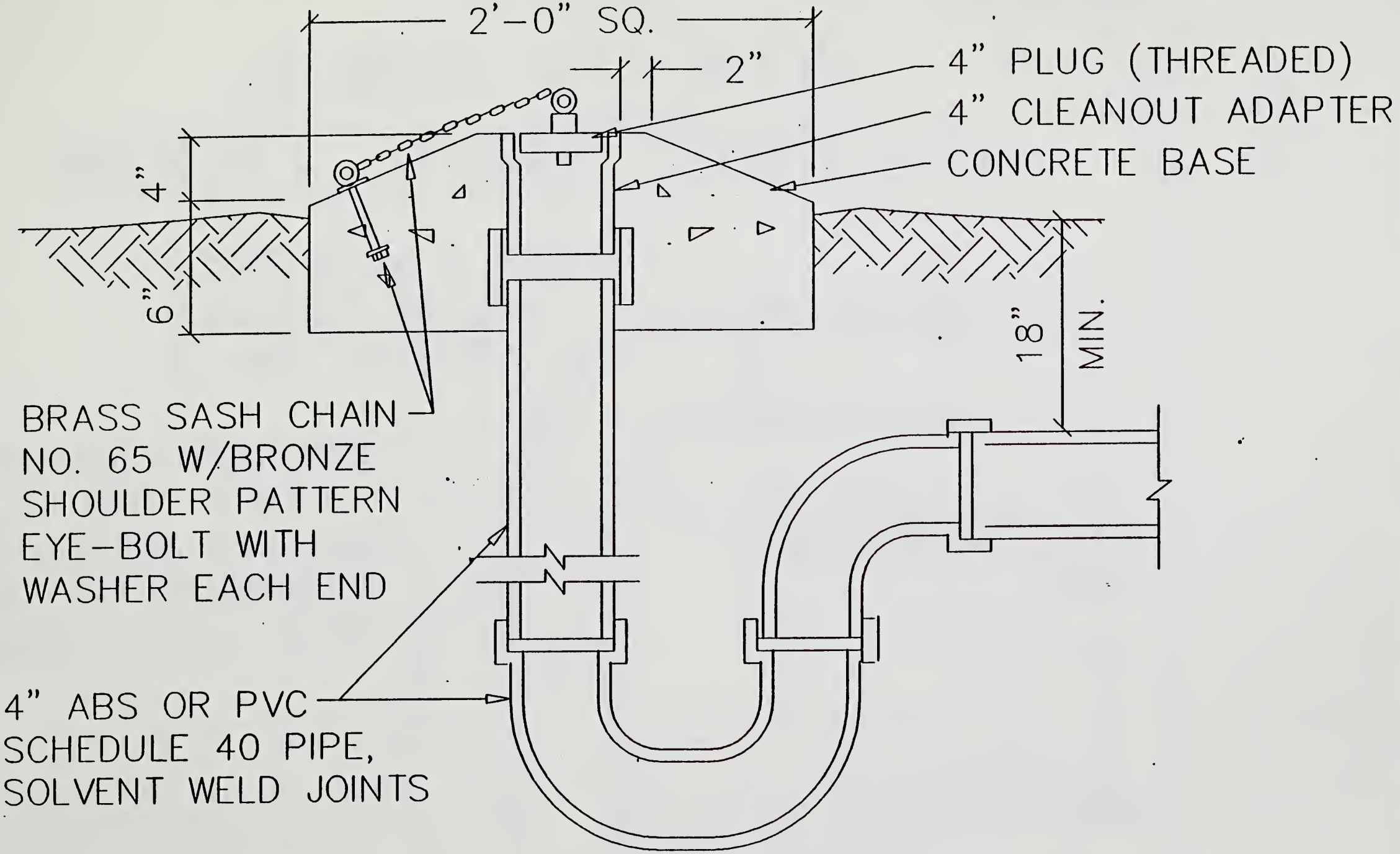


MOBILE HOME SANITARY SEWER HOOKUP

NO SCALE

51-56

2/29/88

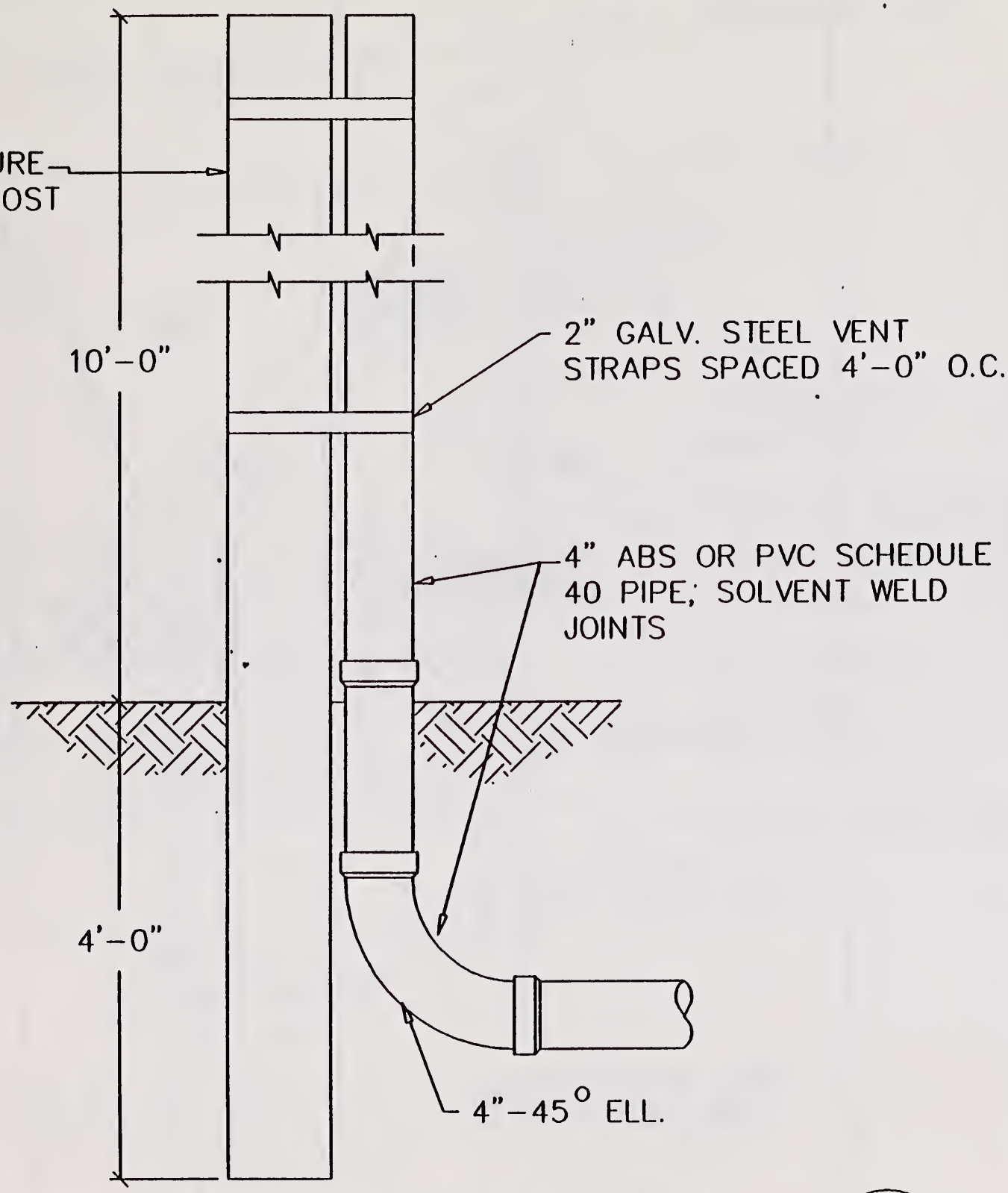


RECREATON VEHICLE SEWER HOOKUP

51-57

NO SCALE

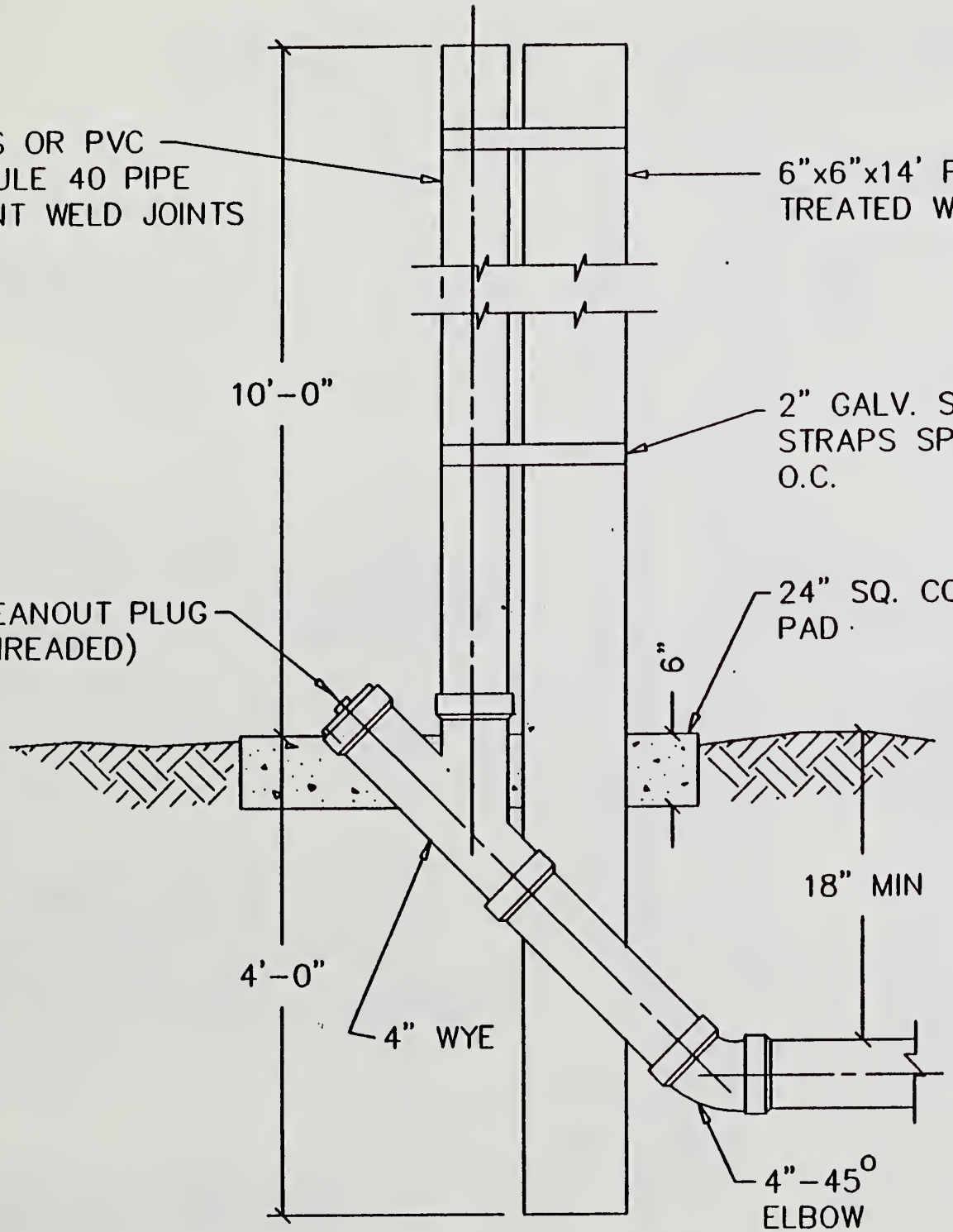
2/29/88



RECREATION VEHICLE VENT

NO SCALE

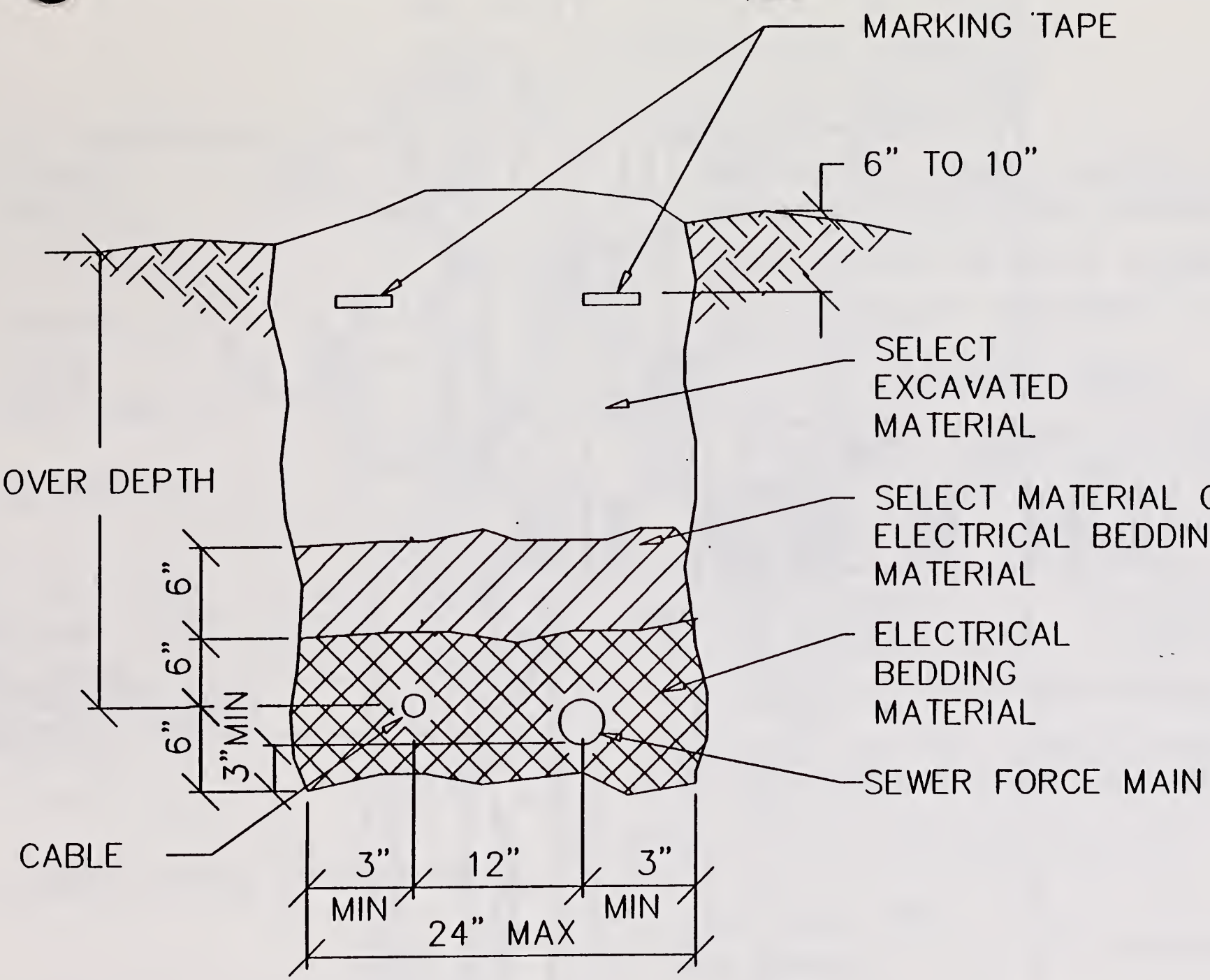
51-58
2/29/88



RECREATION VEHICLE CLEANOUT & VENT

N CALE

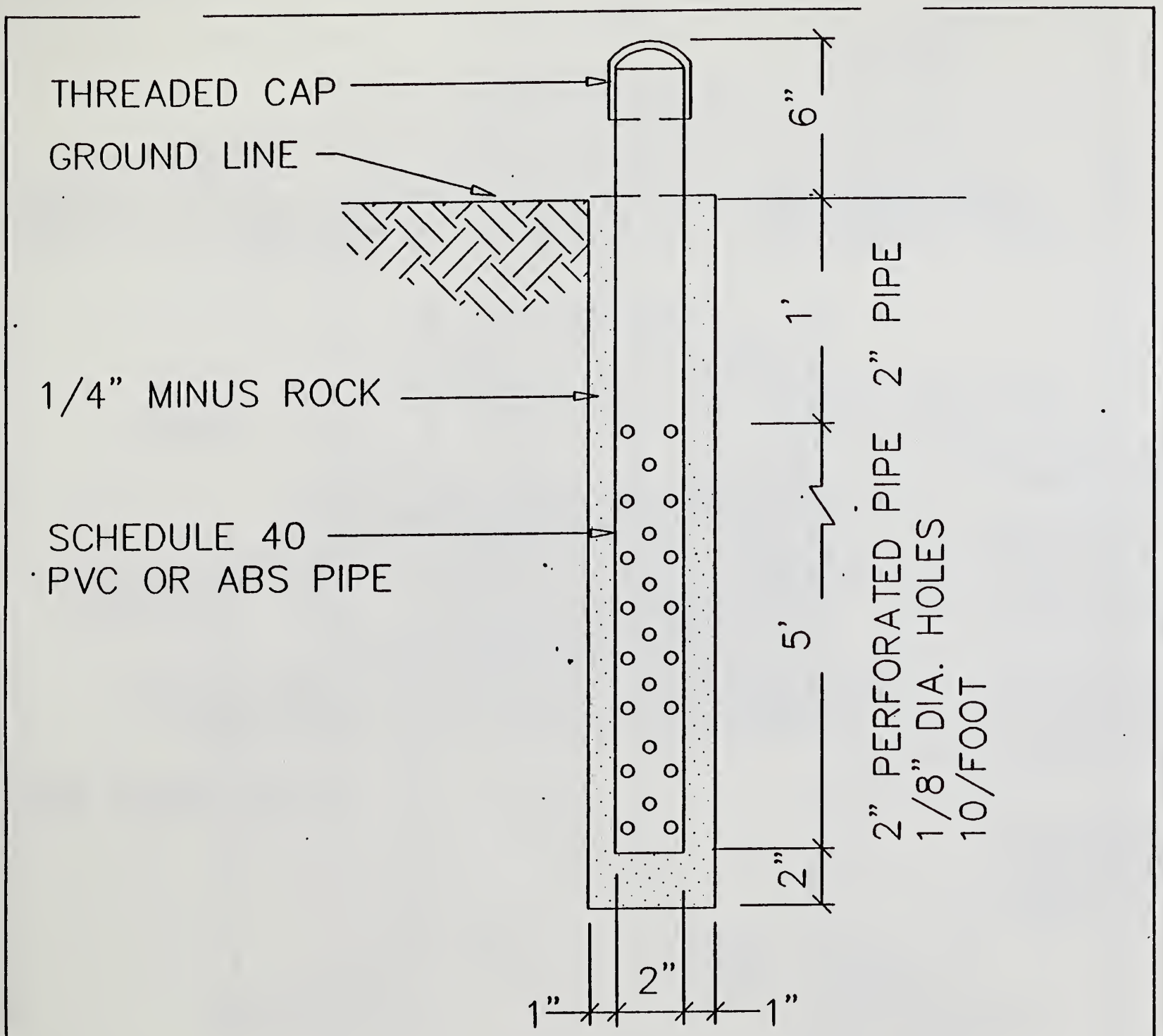
51-59
2/29/88



SEWER FORCE MAIN AND TELEPHONE CABLE TRENCH

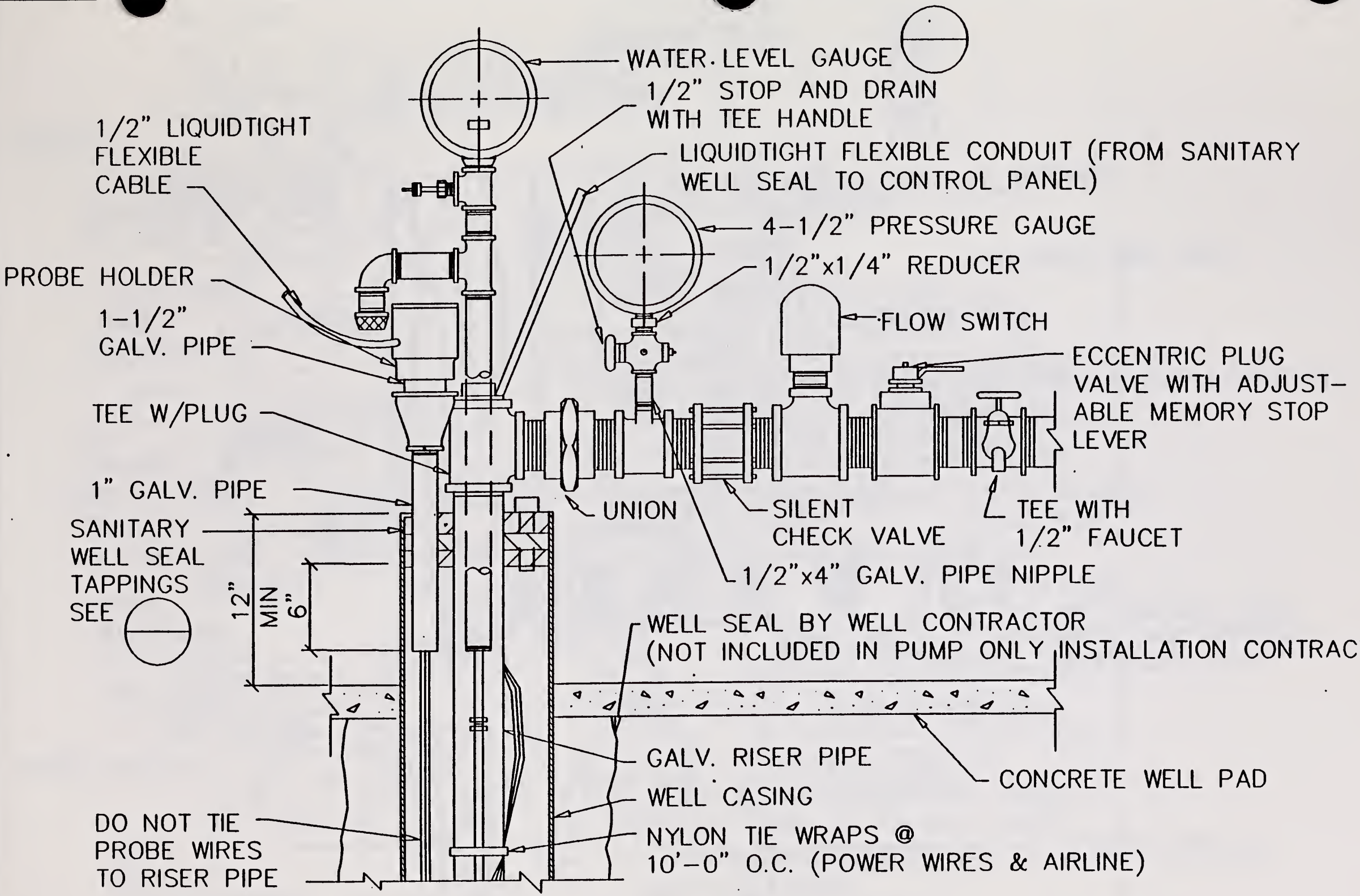
51-60
2/29/88

NO SCALE



OBSERVATION WELL

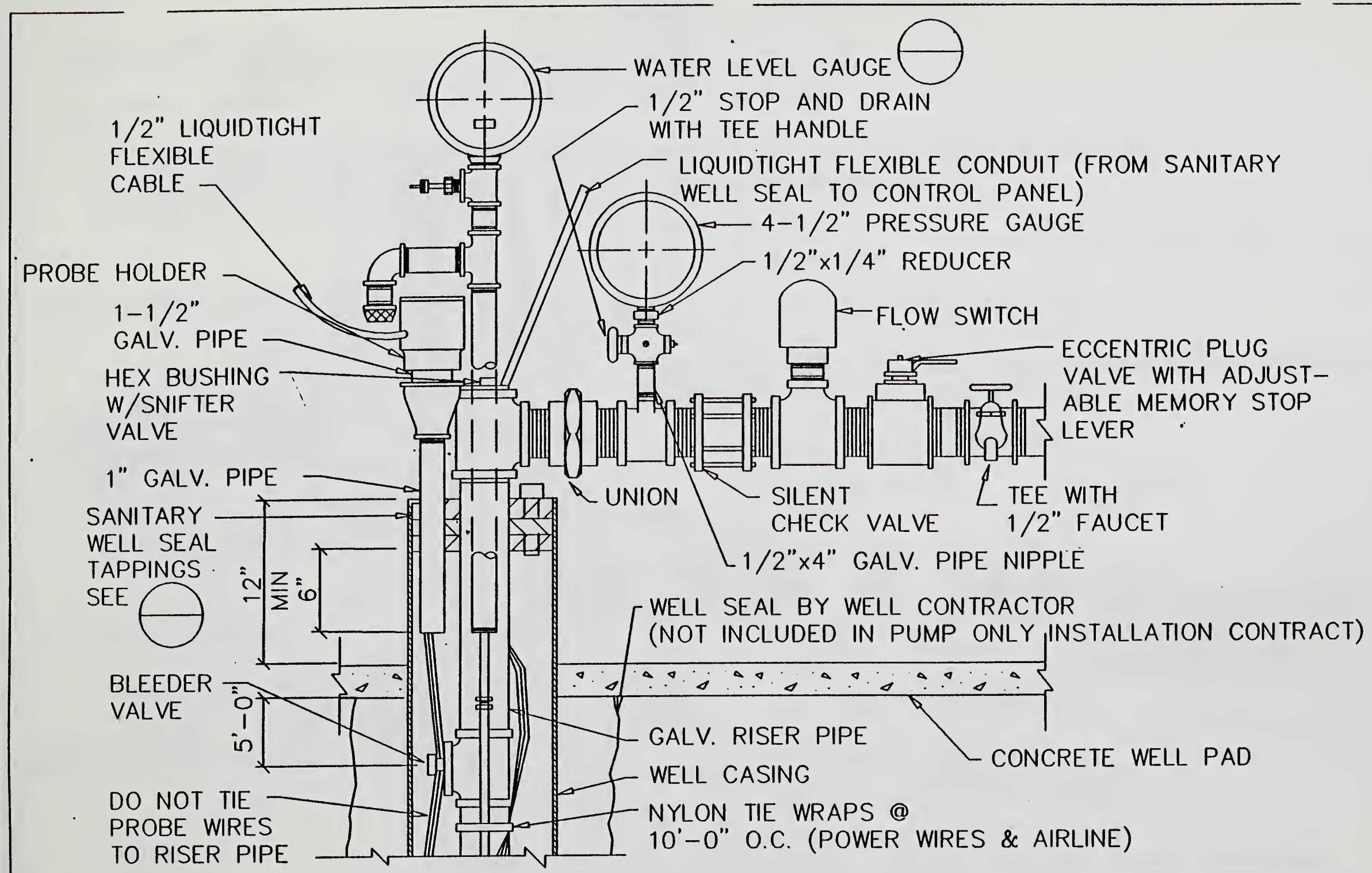
NO SCALE 2/29/[illegible] 51-61



WELL HEAD DETAIL

NO SCALE

51-73
2/29/88



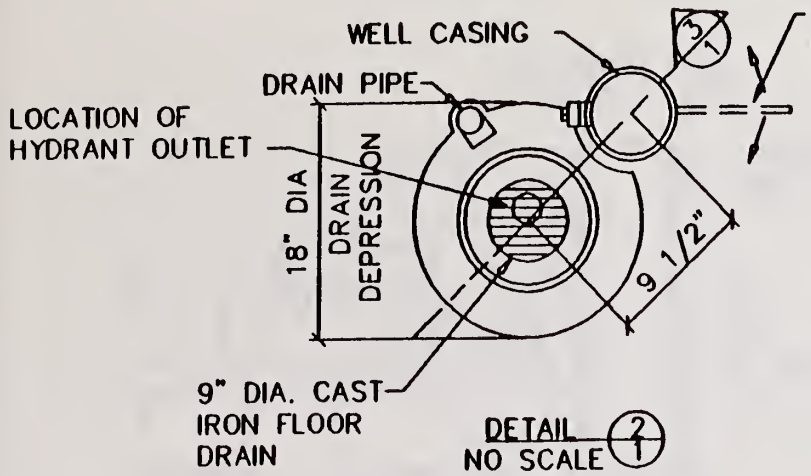
WELL HEAD DETAIL WITH BLEEDER VALVE

NO SCALE

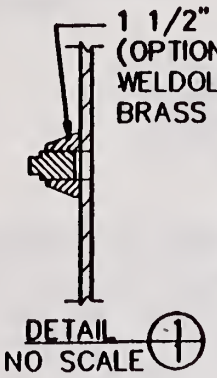
51 74

2/ 38

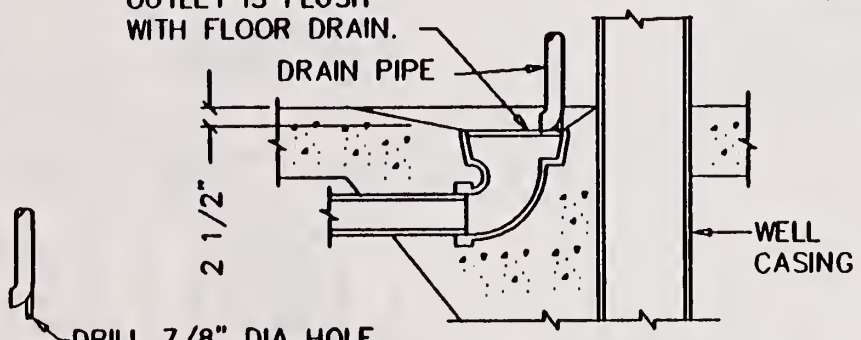
NO SCALE



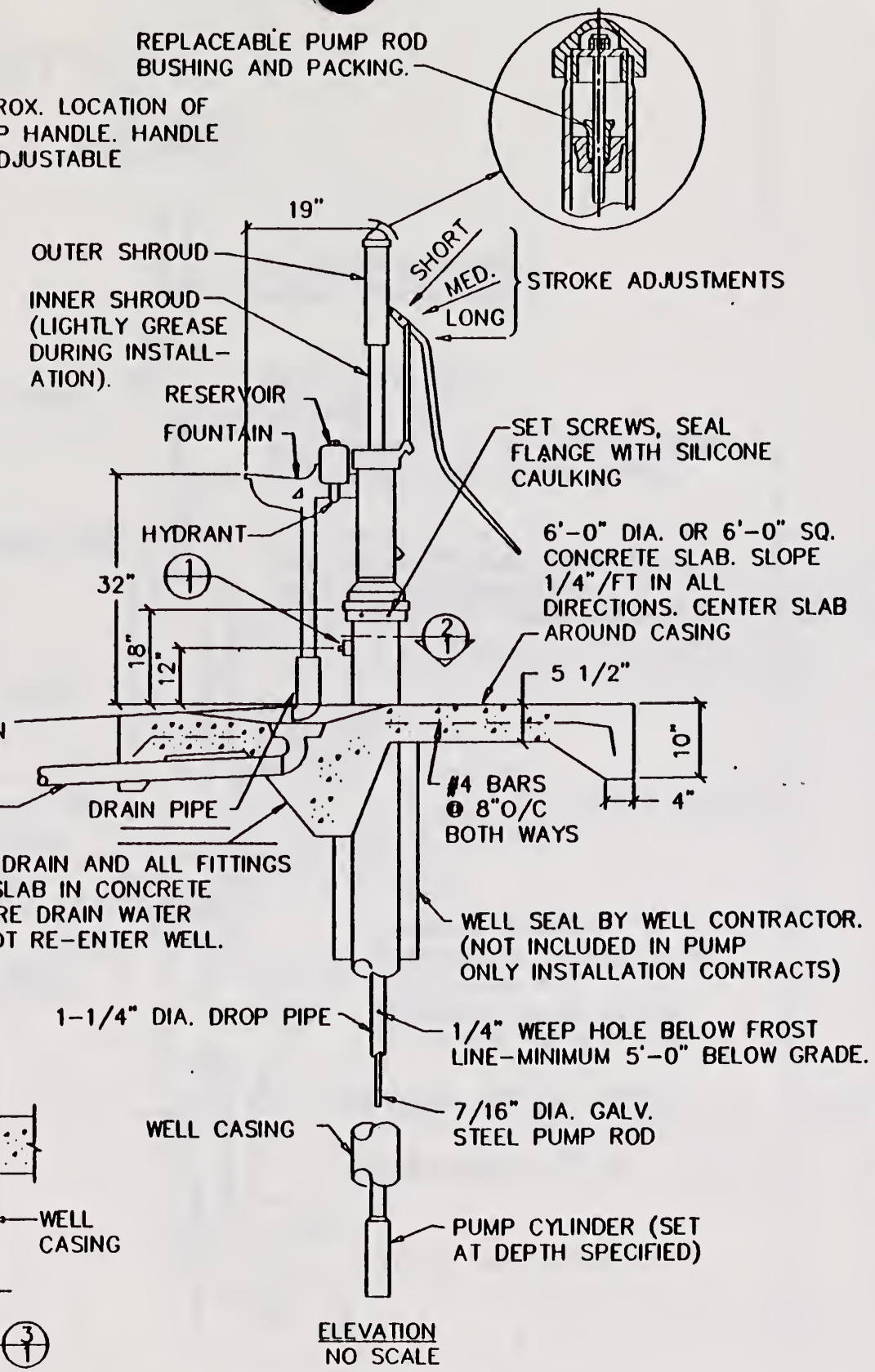
DETAIL 2/1
NO SCALE



DETAIL 1/1
NO SCALE



DETAIL 3/1
NO SCALE

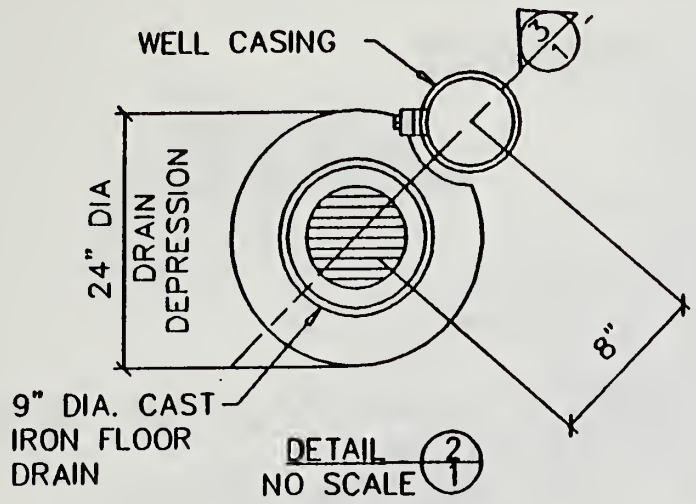


ELEVATION
NO SCALE

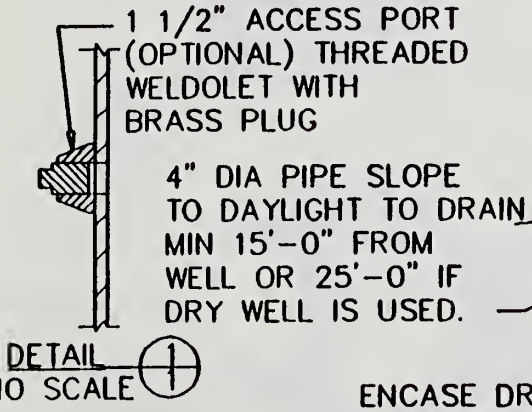
DRINKING-FOUNTAIN TYPE HAND PUMP AND SLAB

51-71
2/29/88

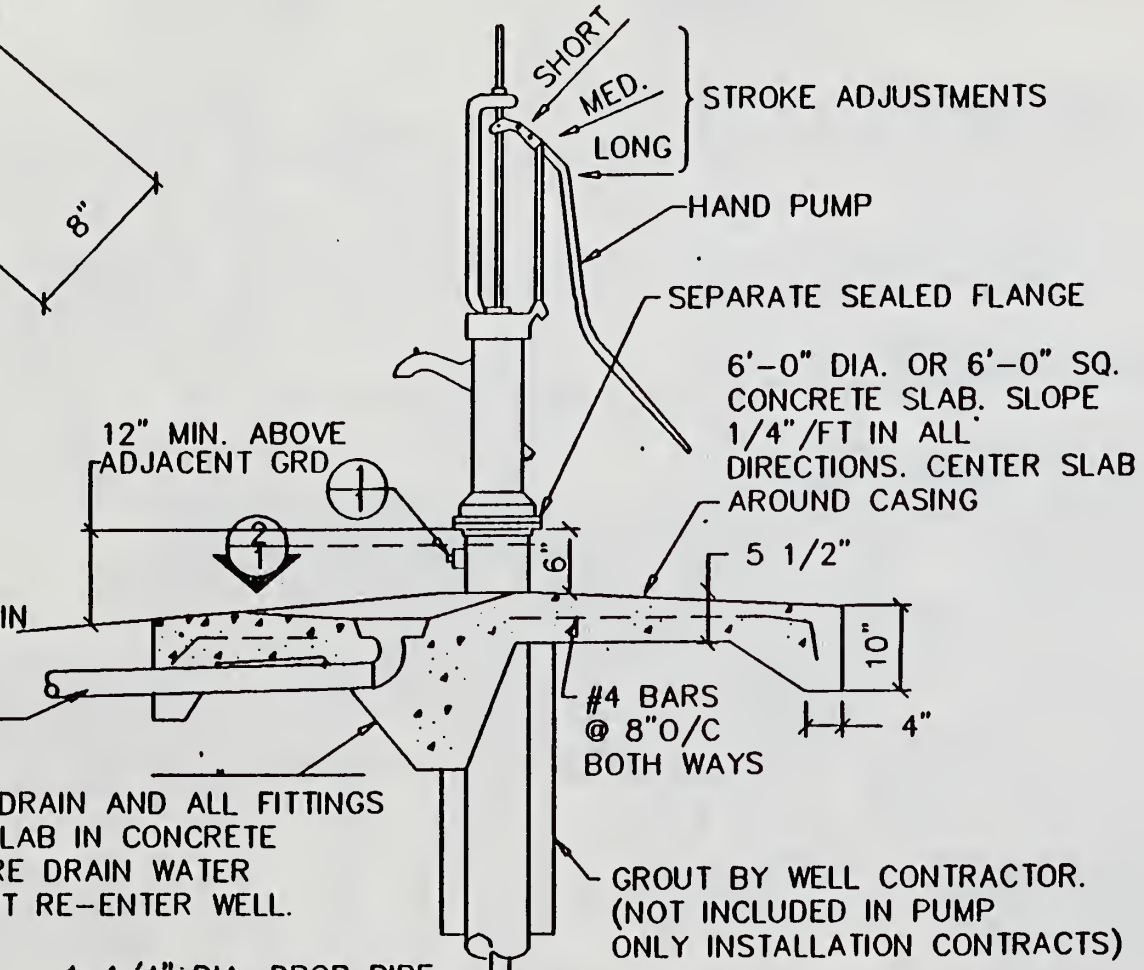
NO SCALE

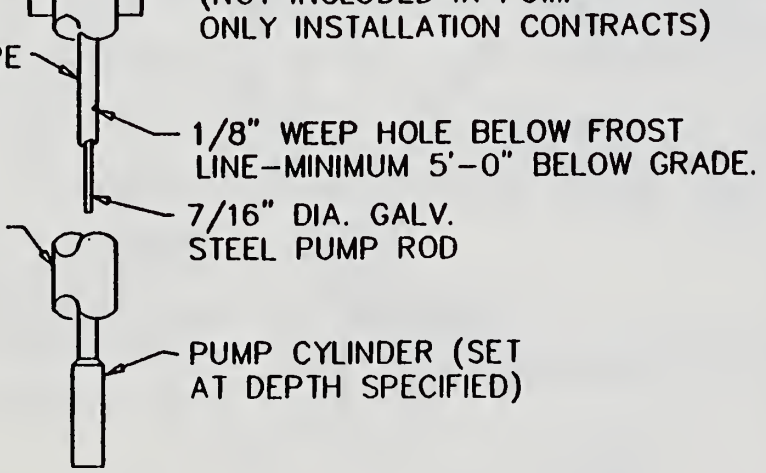


DETAIL 2/1
NO SCALE

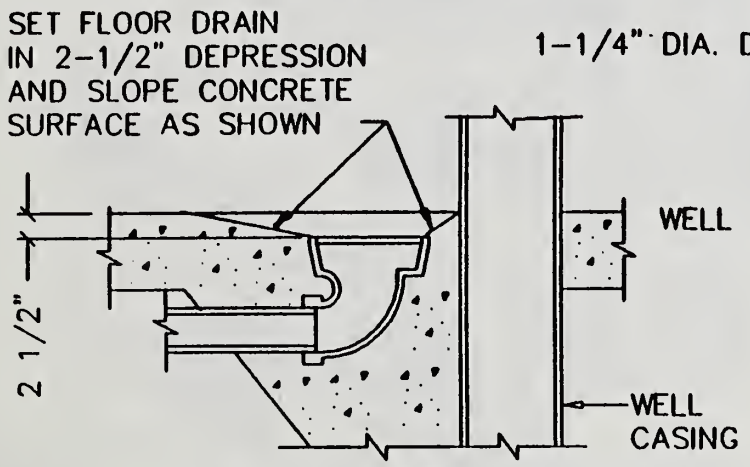


DETAIL 1/1
NO SCALE





ELEVATION
NO SCALE



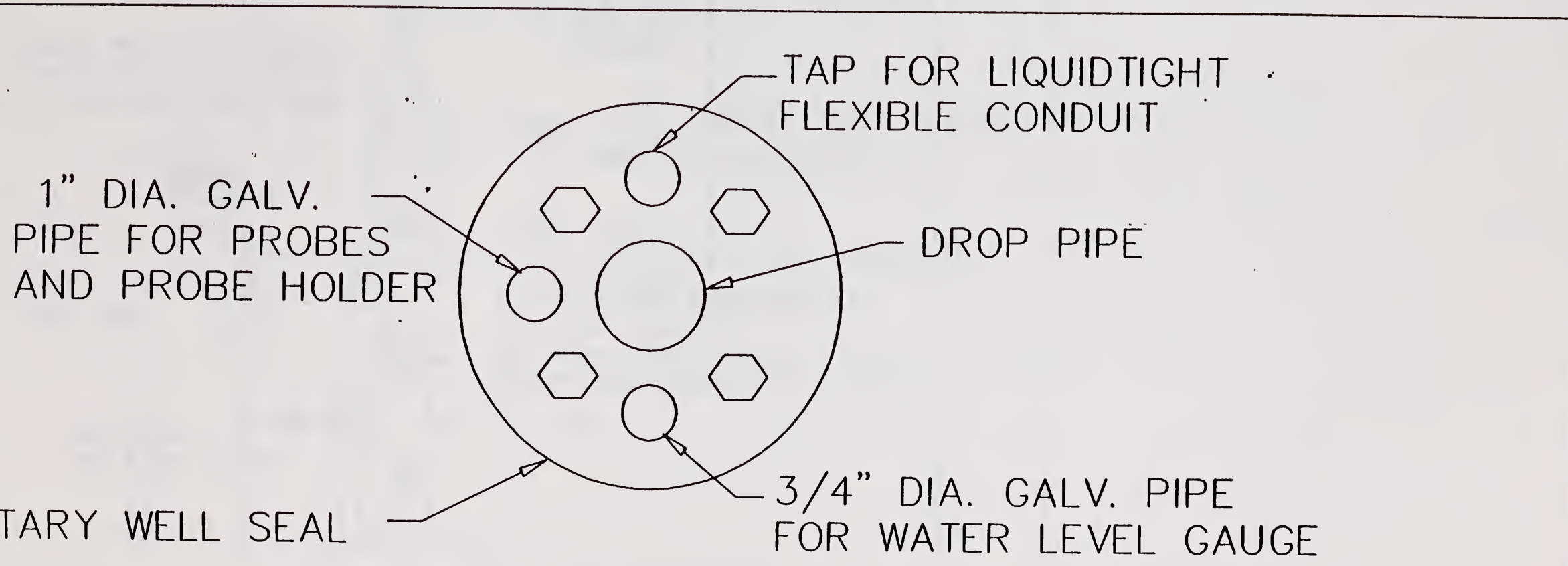
DETAIL 3/1
NO SCALE

SPIGOT TYPE HAND PUMP AND SLAB

NO SCALE

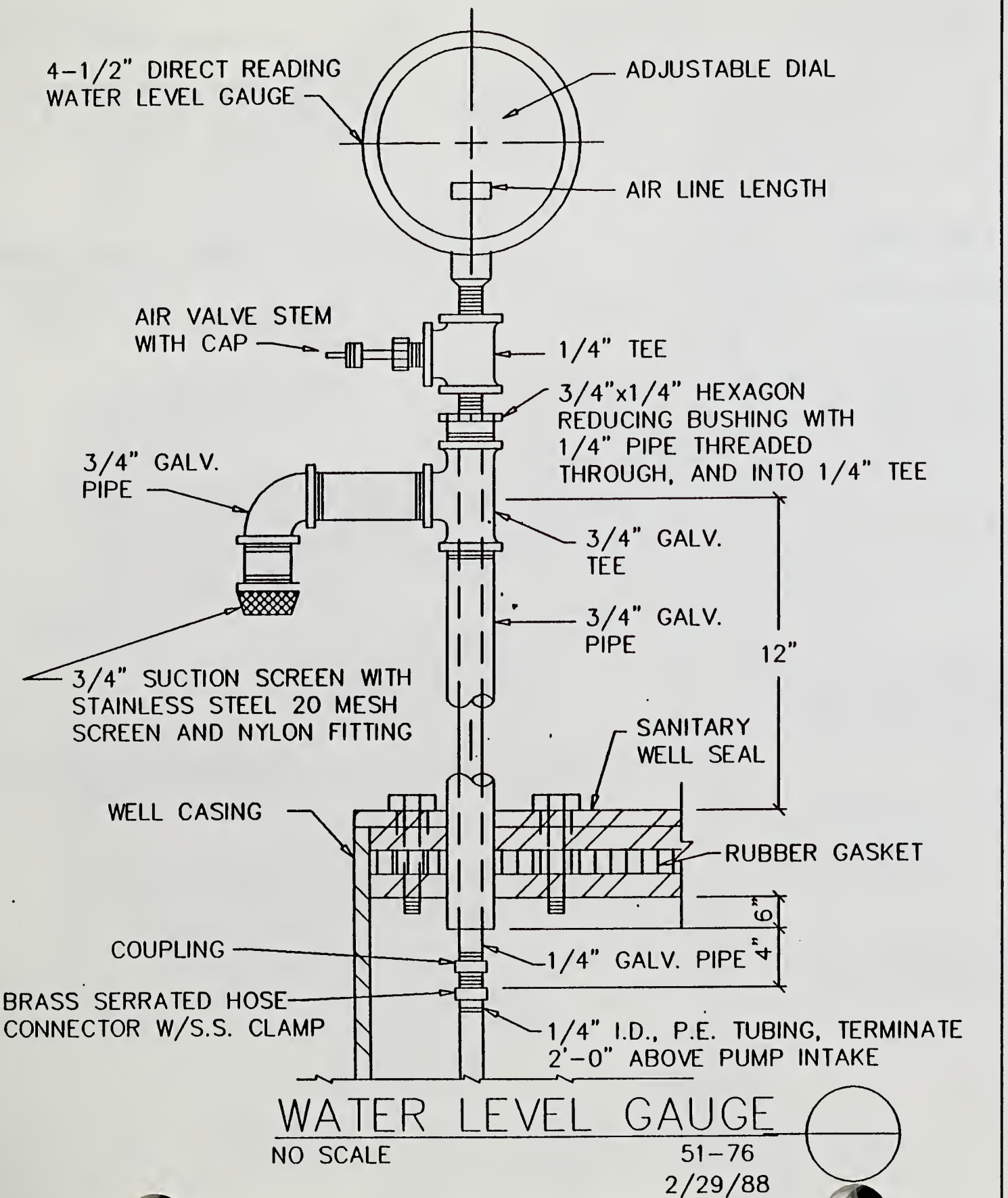
51-72
2/29/88

NO SCALE 2/29/88



SANITARY WELL SEAL TAPPINGS

NO SCALE 51-75 2/29/88 FEB. 14,1986

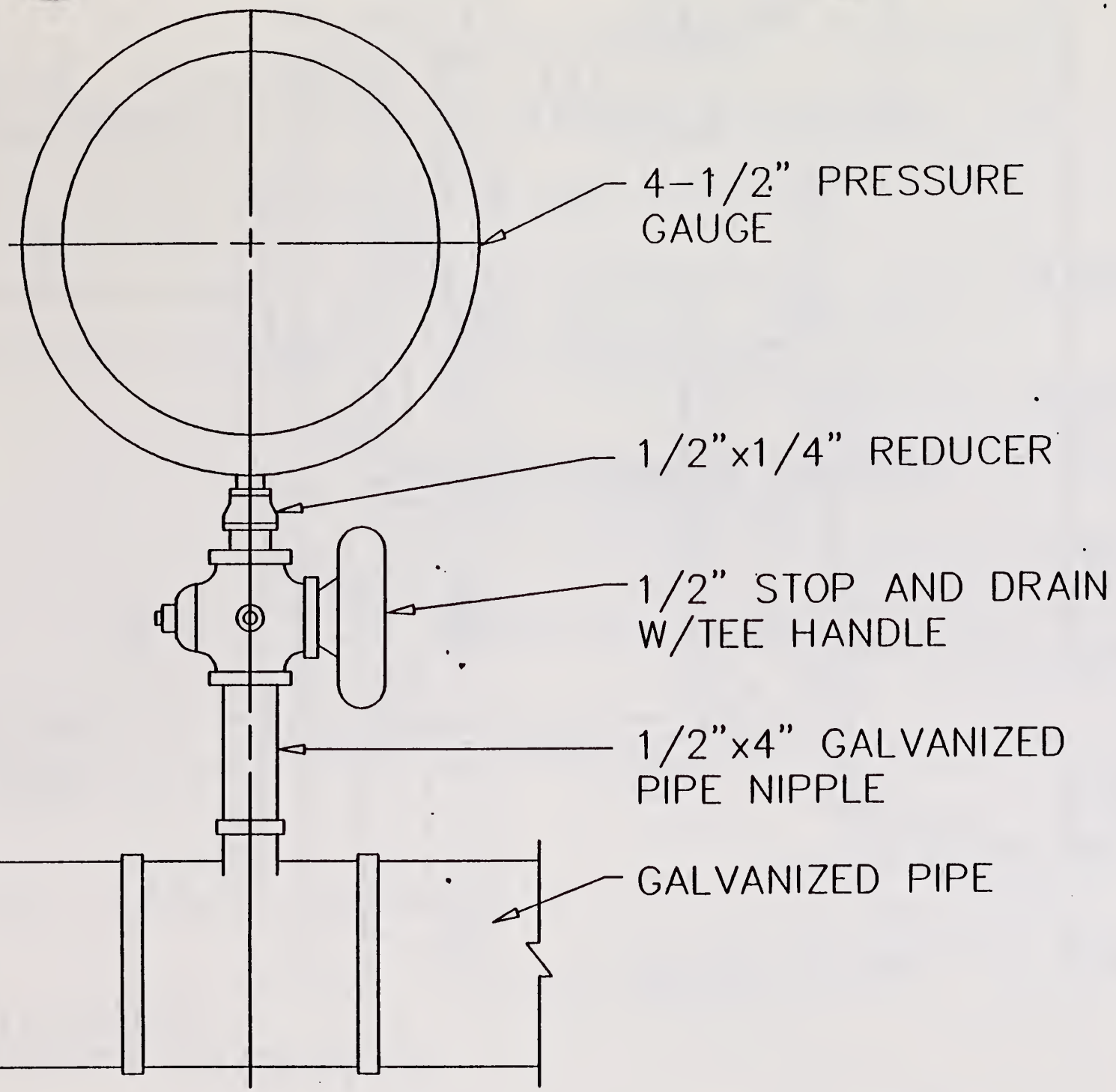


WATER LEVEL GAUGE

NO SCALE

51-76

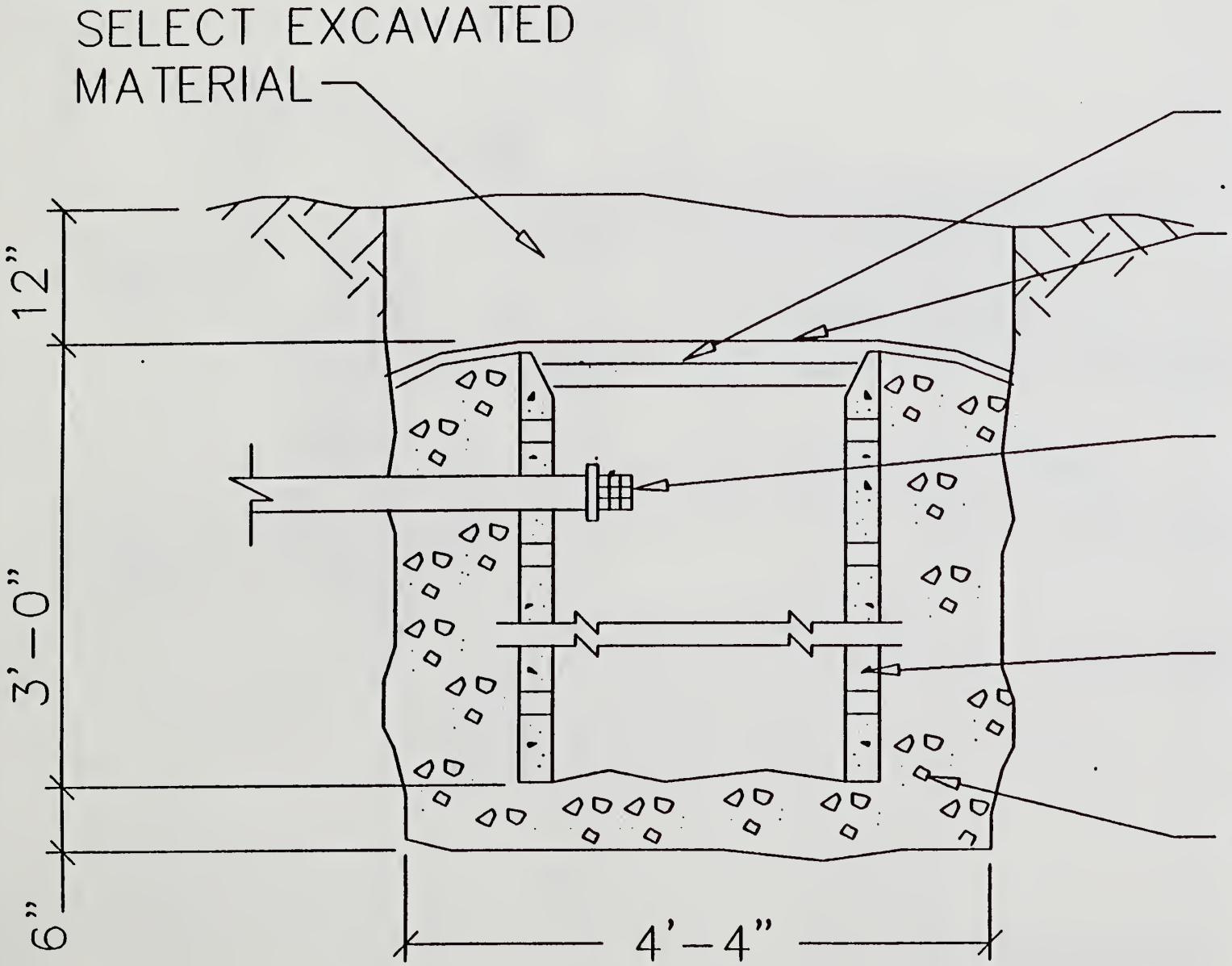
2/29/88



PRESSURE GAUGE

NO SCALE

51-77
2/29/88

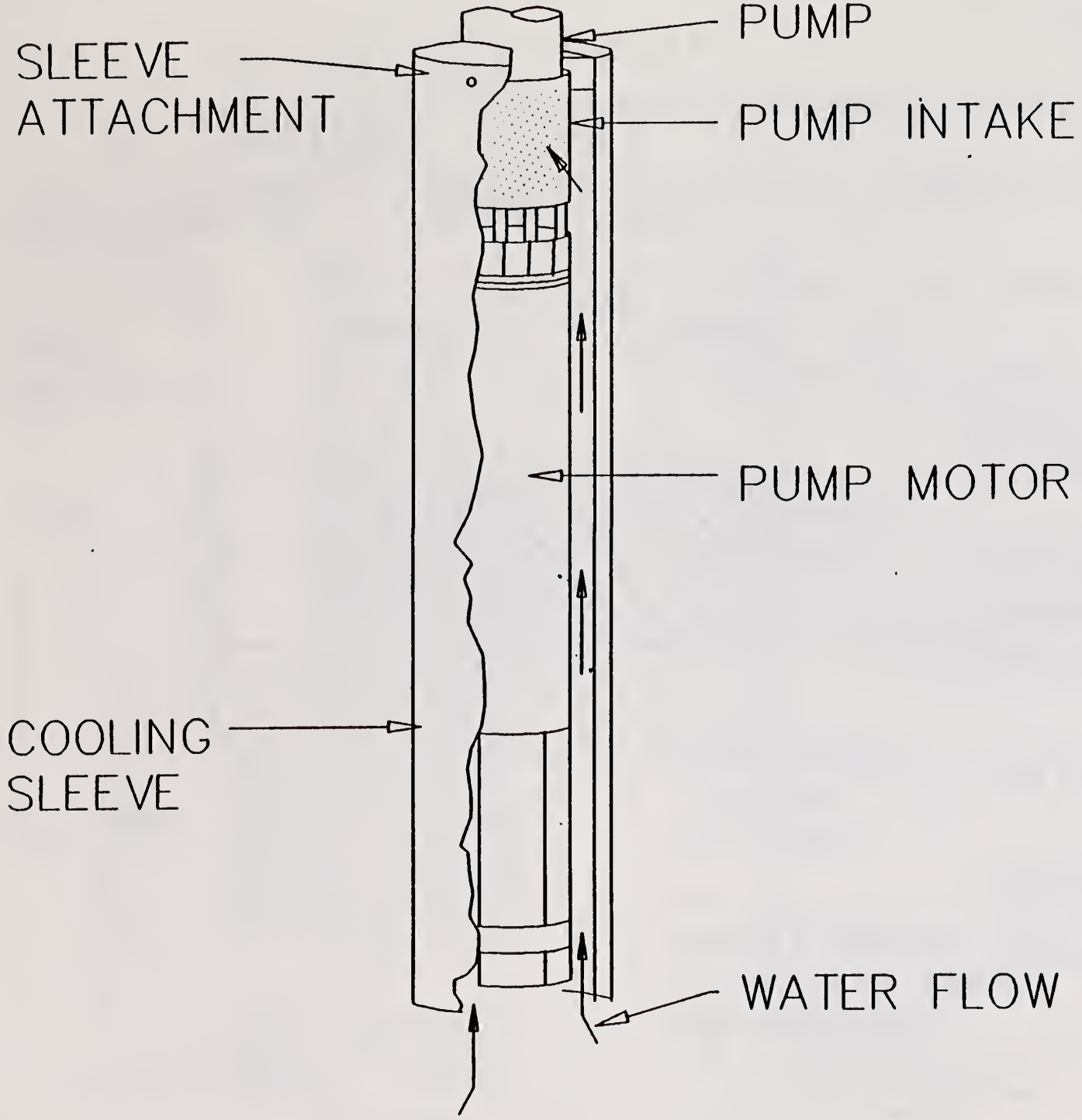


DRY WELL

NO SCALE 51-78
2/29/88

NOTE:
FOR USE WITH
HAND PUMPS ONLY.

NO SCALE
51-79
2/29/88

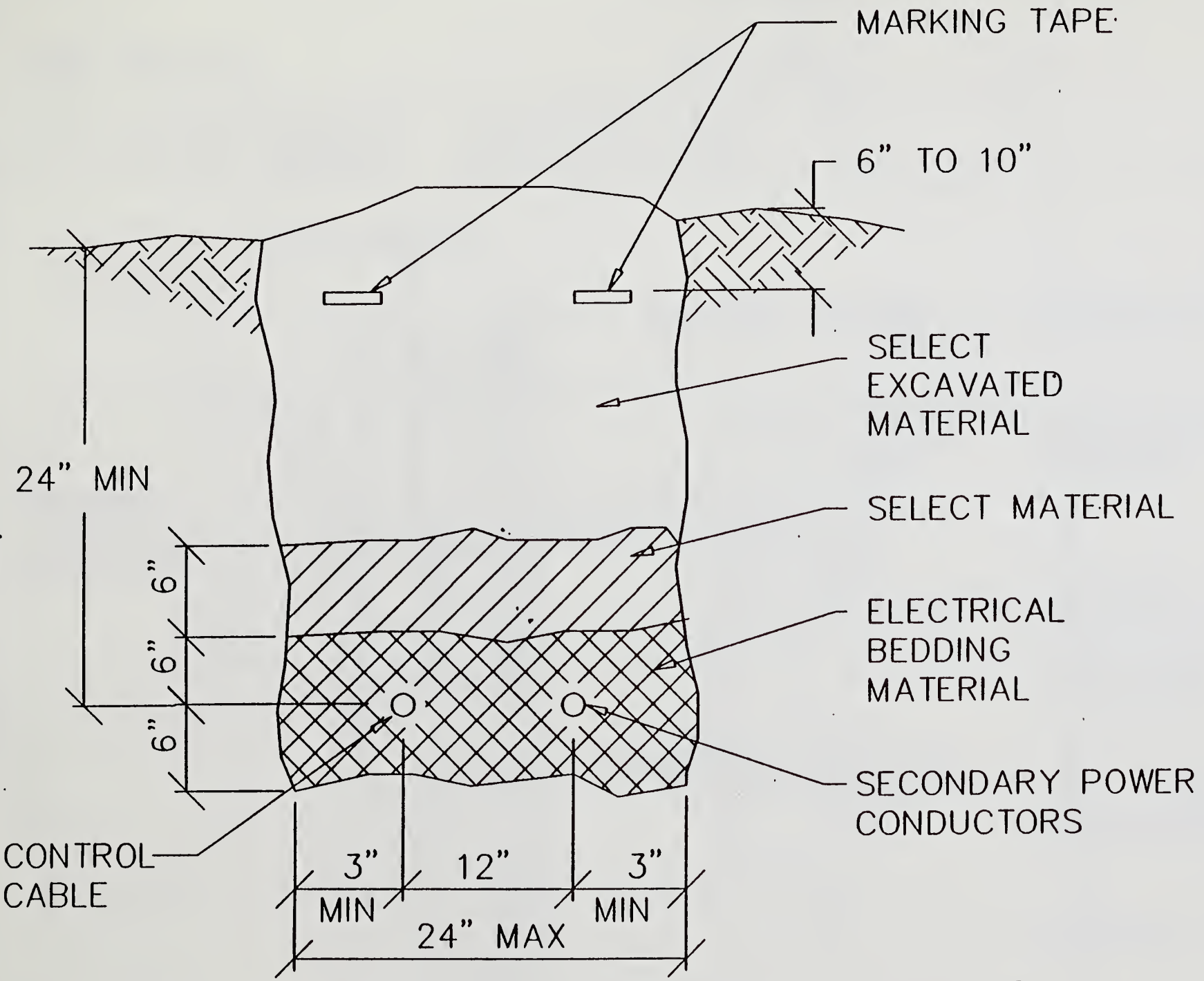


COOLING SLEEVE

NO SCALE

51-79

2/29/88



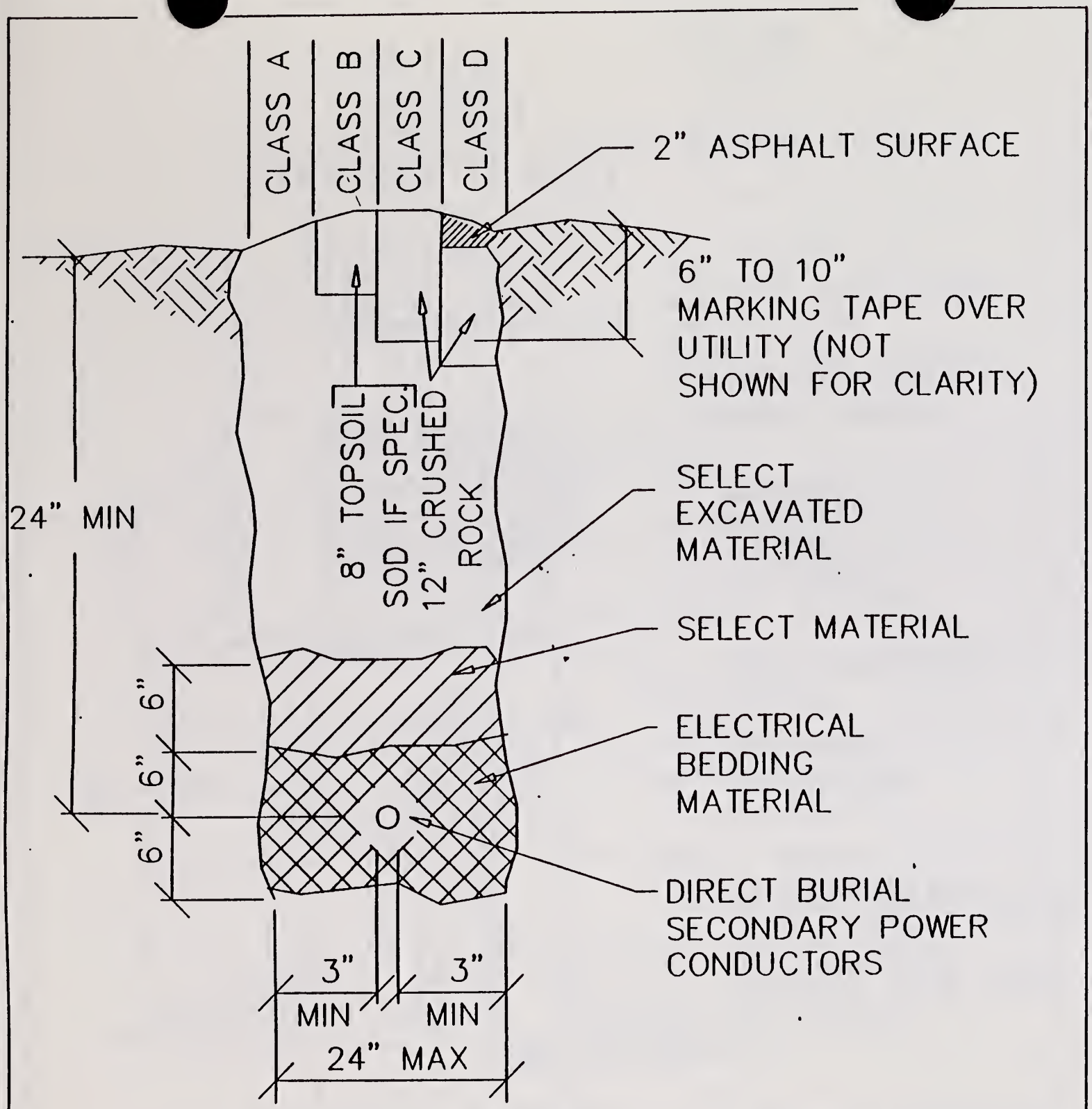
SECONDARY POWER CONDUCTORS & CONTROL CABLE TRENCH

(CLASS A BACKFILL)

NO SCALE

51-81
2/29/88

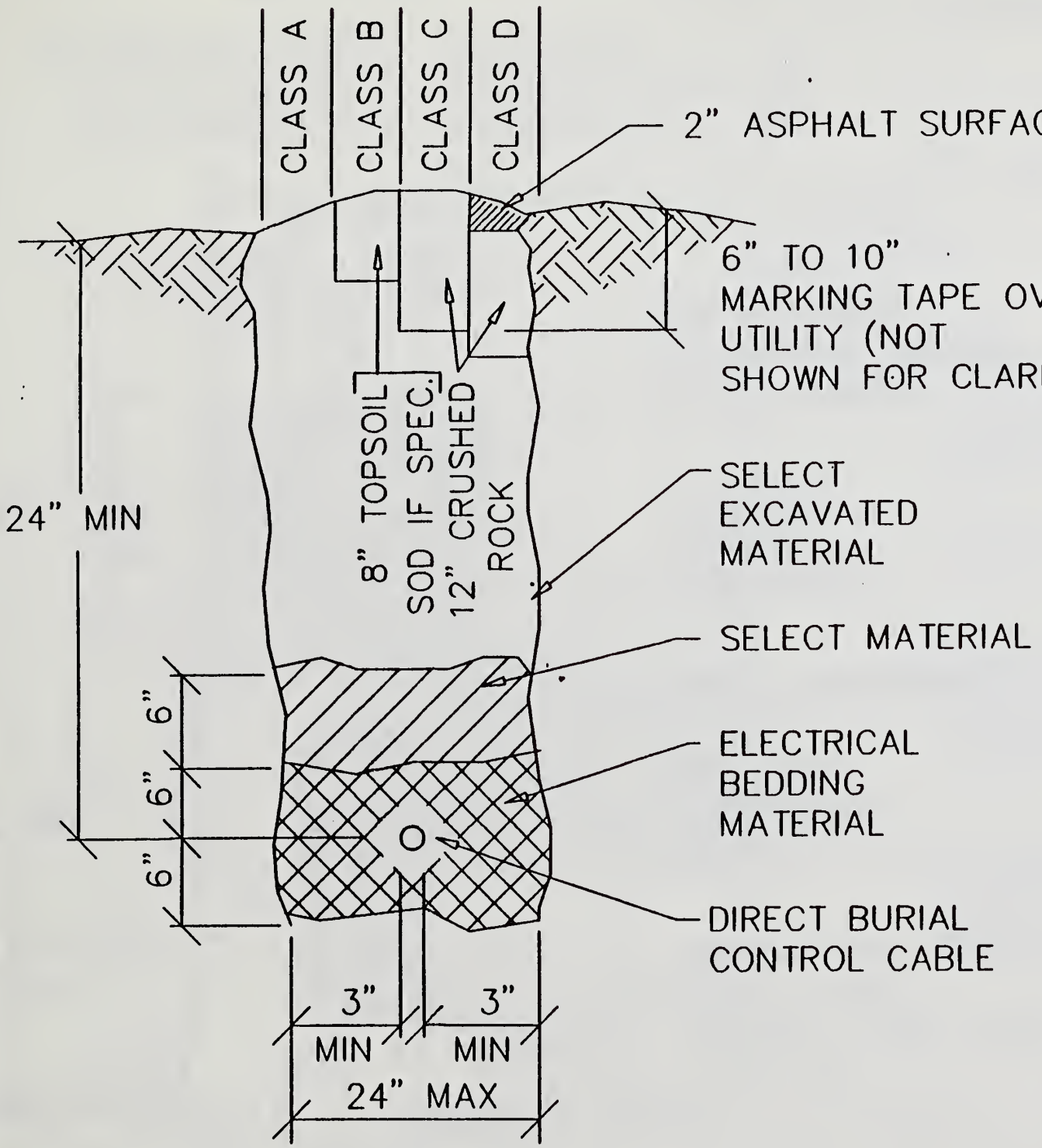
NO SCALE



SECONDARY POWER CONDUCTORS TRENCH

NO SCALE

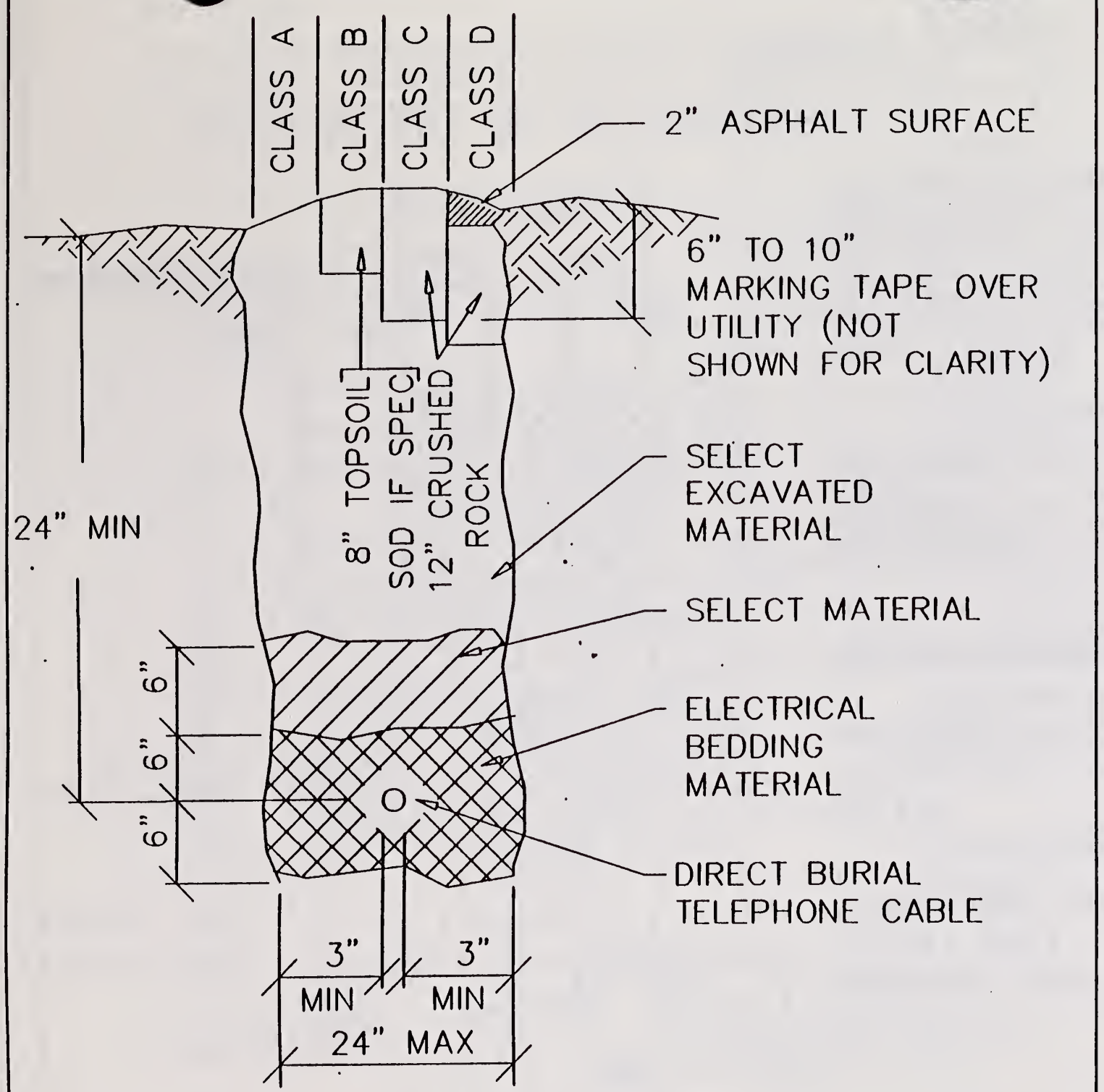
51-82
2/29/88



CONTROL CABLE TRENCH

NO SCALE

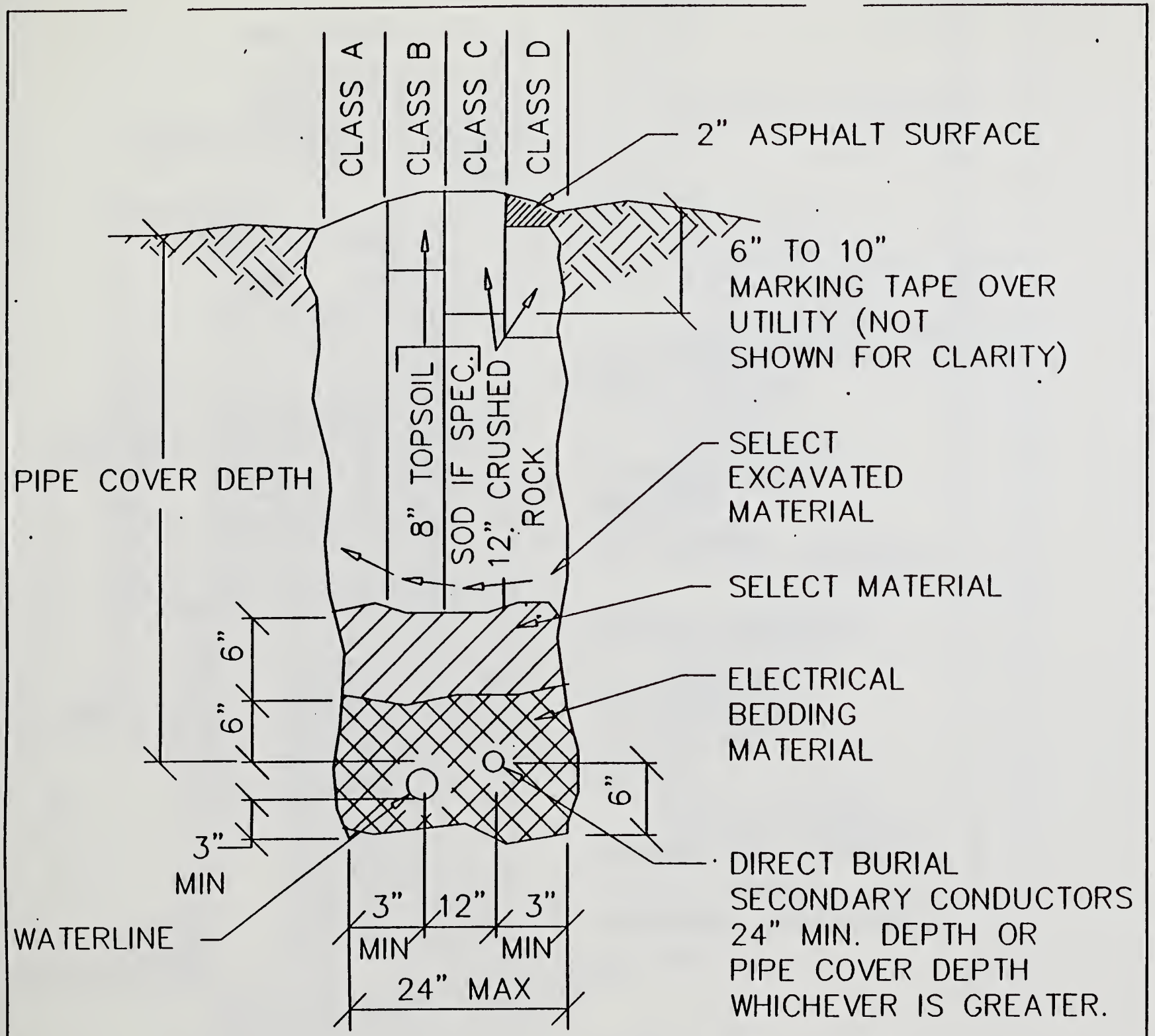
51-83
2/29/88



TELEPHONE CABLE TRENCH

NO SCALE

51-84
2/29/88



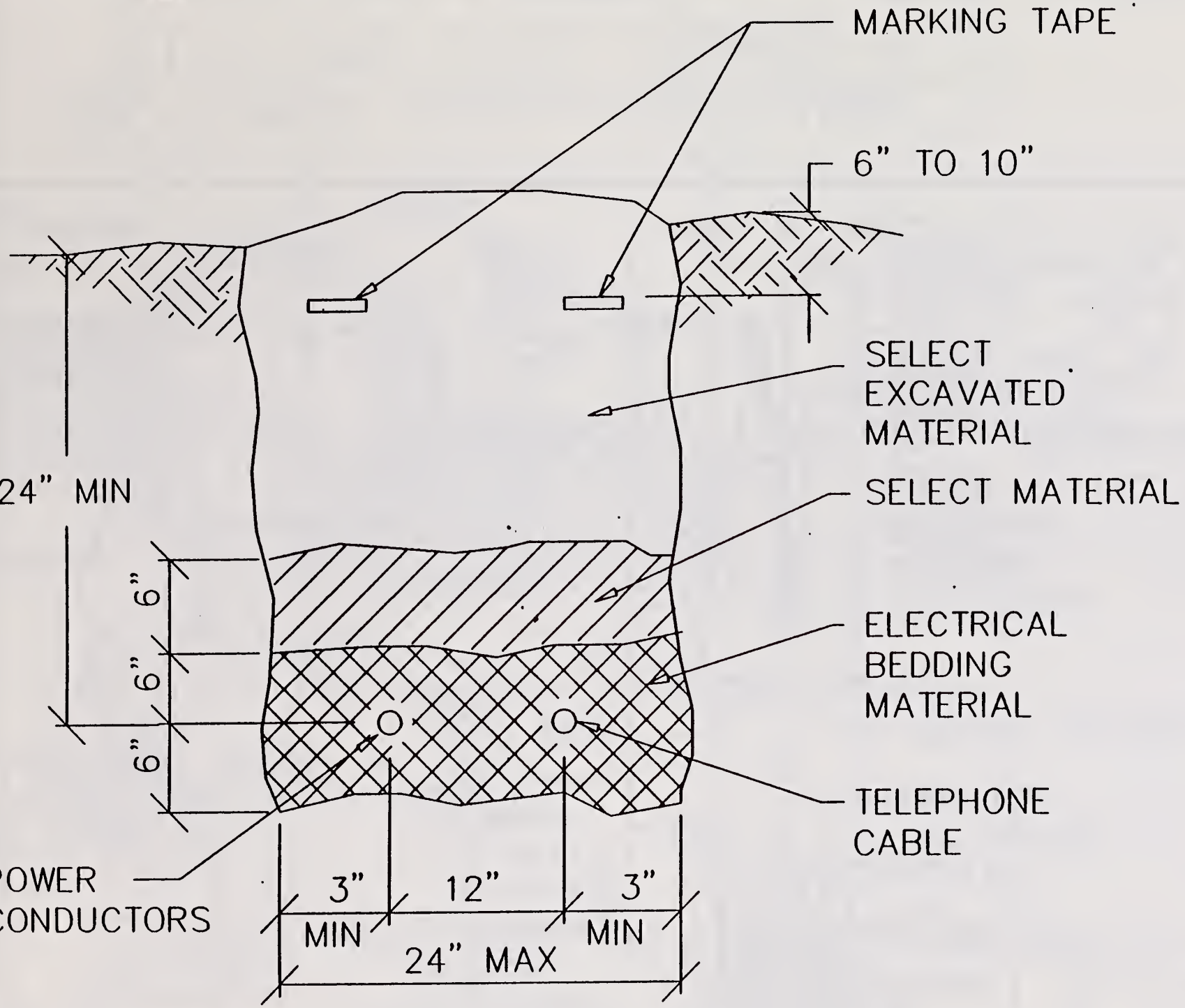
WATERLINE & SECONDARY POWER CONDUCTORS TRENCH

NO SCALE

51-85
2/88

NO SCALE

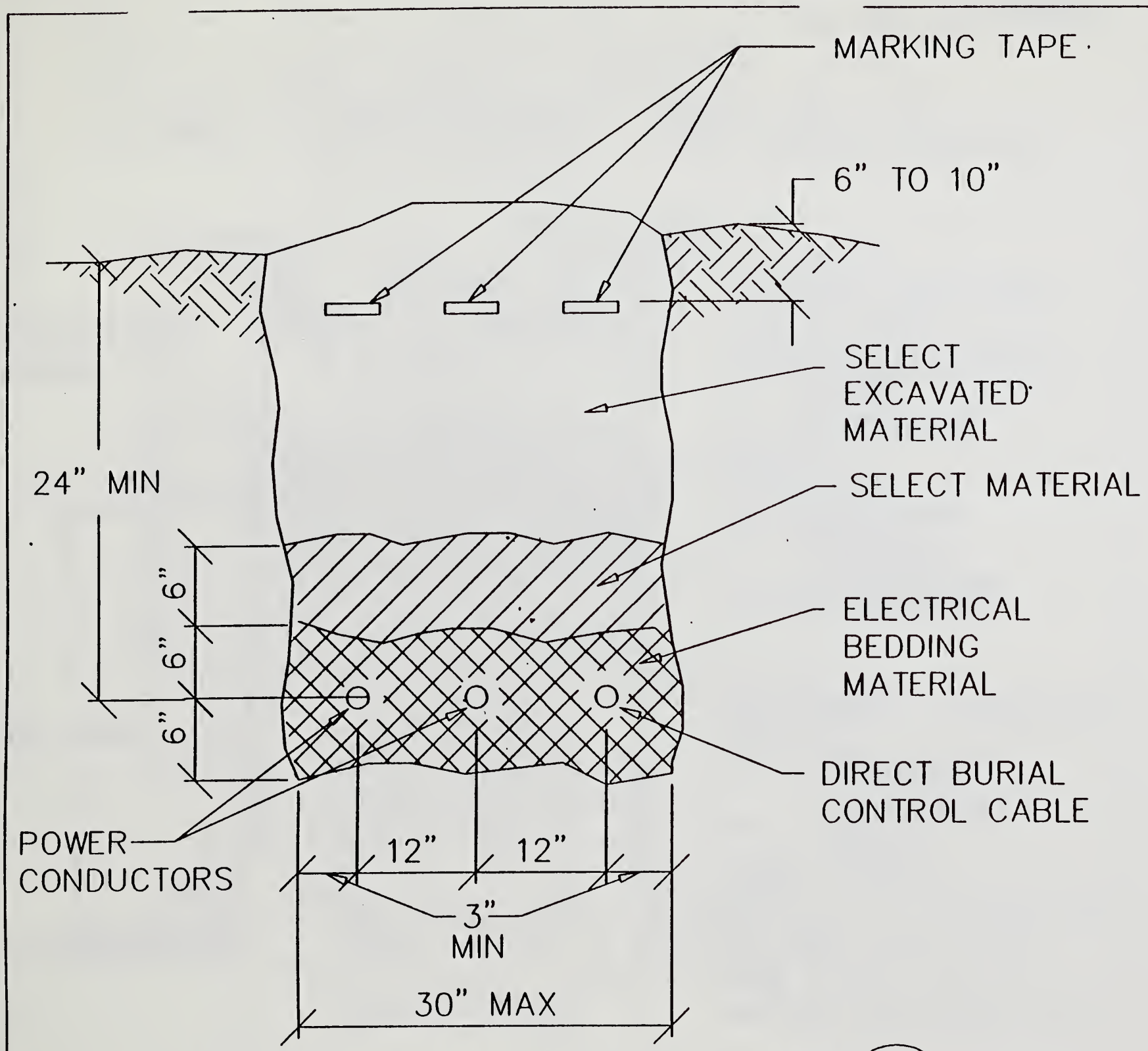
2/29/88



POWER CONDUCTORS AND TELEPHONE CABLE TRENCH

NO SCALE (CLASS A BACKFILL)

51-86 2/29/88



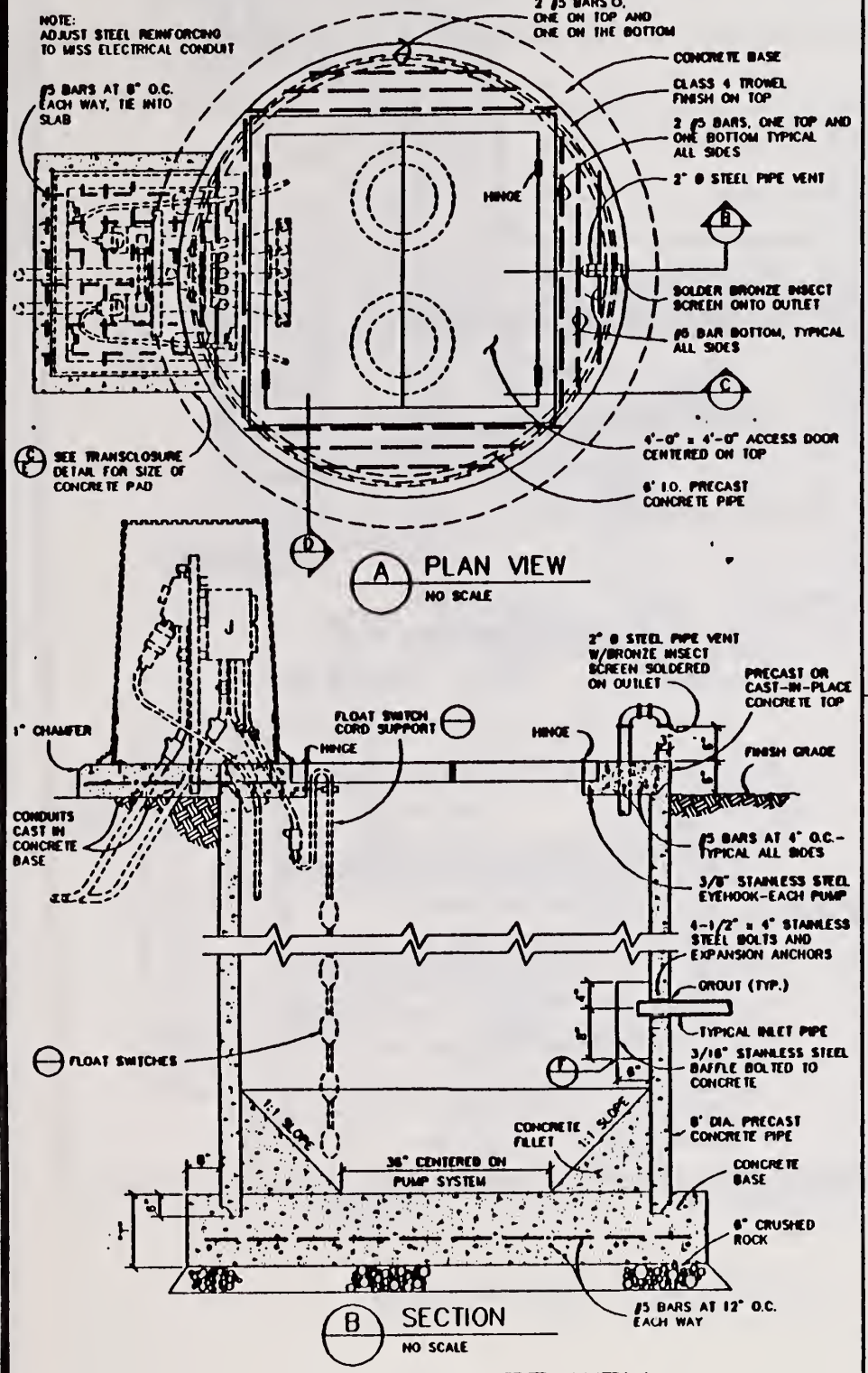
TWO POWER CONDUCTORS AND TELEPHONE CABLE TRENCH

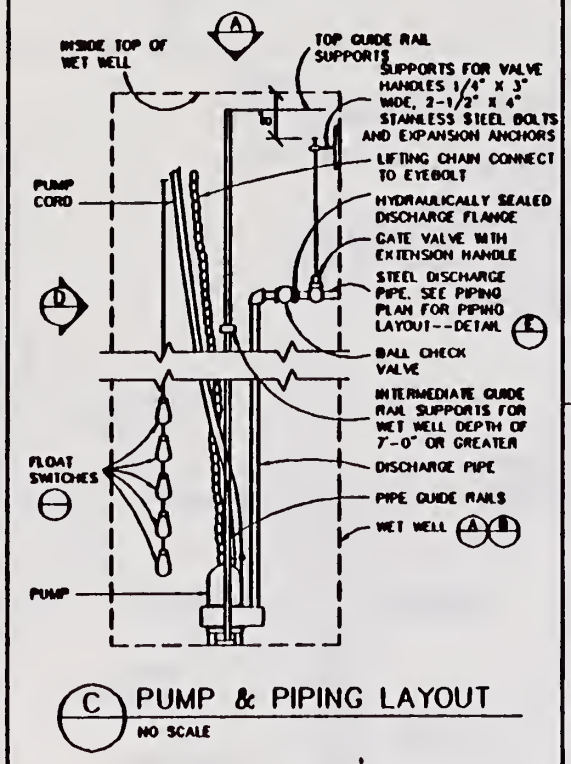
NO SCALE (CLASS A BACKFILL)

51-87 2/29/88

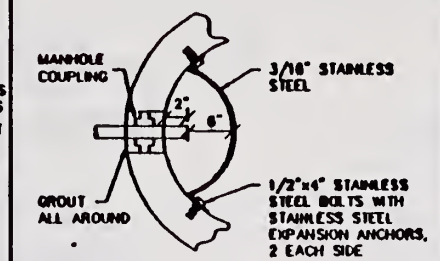
NO SCALE (CLASS A BACKFILL)

87 2/29/88

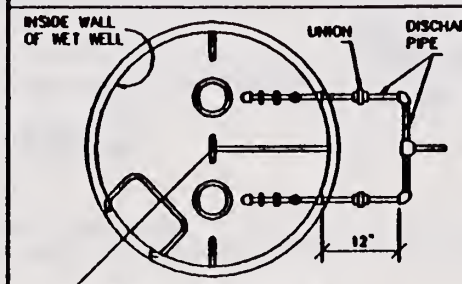




NOTE:
VERIFY PUMP LOCATION AND PIPING AND RAIL CONFIGURATION WITH PUMP MANUFACTURER



C0000100
REV.12-15-86



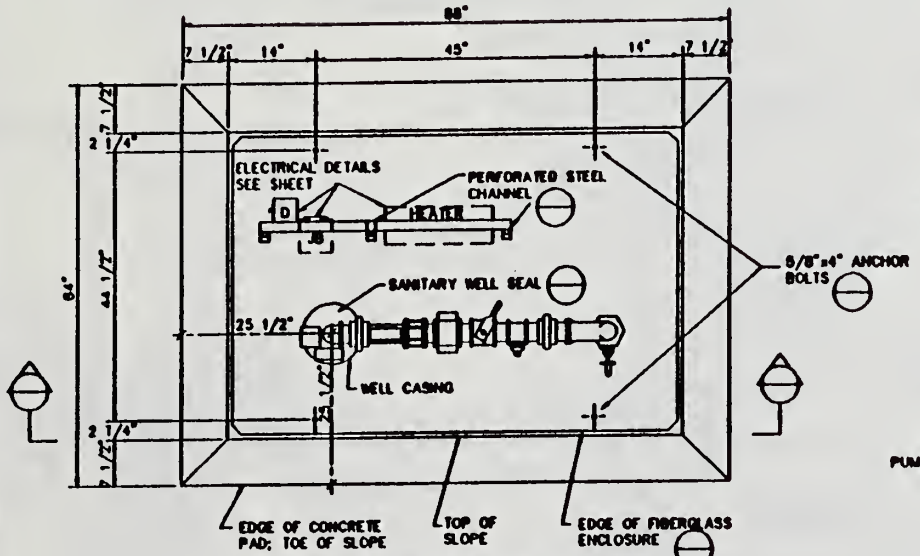
ELEVATION SCHEDULE

PUMP STA.				
FINISH GRADE				
RIM				
DISCHARGE INVERT				
INLET INVERT( )				
BOTTOM FOOTING THICKNESS"T"	___INCHES	___INCHES	___INCHES	___INCHES

R. O. APPROVAL
DATE
APPROVED:
FOREST SUPERVISOR
R. O. STAFF

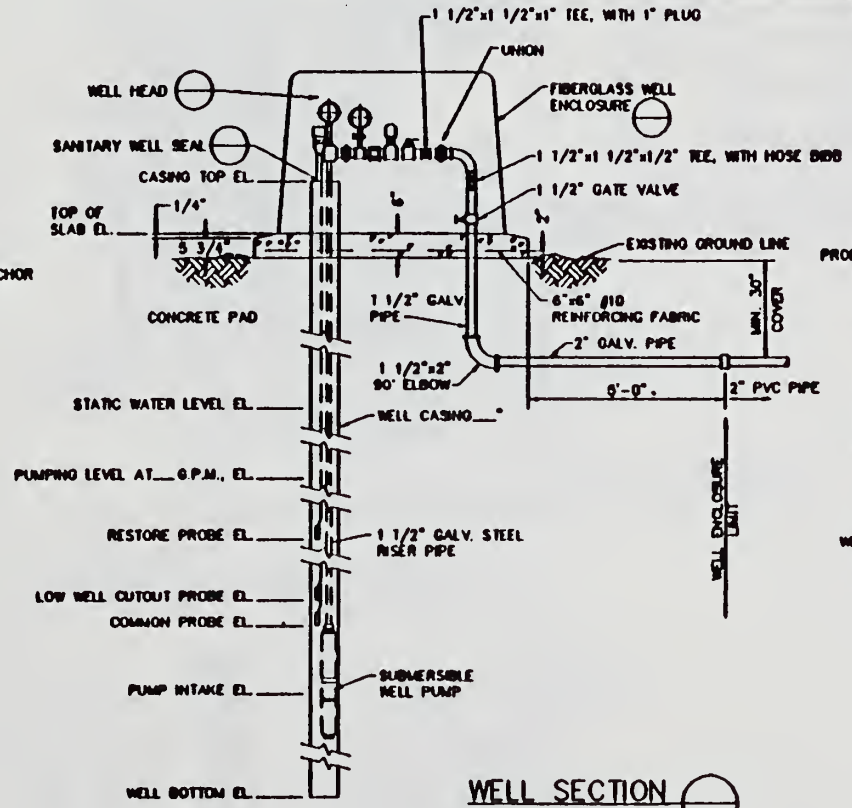
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION SIX
THE PACIFIC NORTHWEST REGION
APPROVED
DRAWN
DATE

6'-0" DIAMETER DUPLEX (GRINDER) PUMP STATION



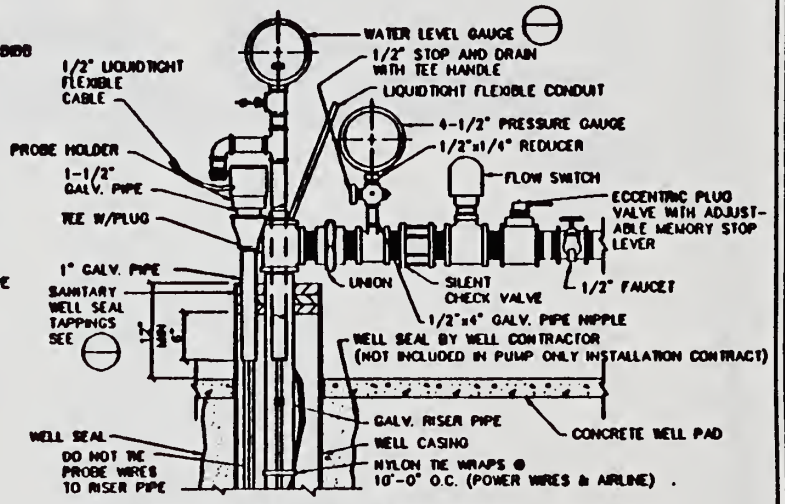
WELL ENCLOSURE PAD

NO SCALE



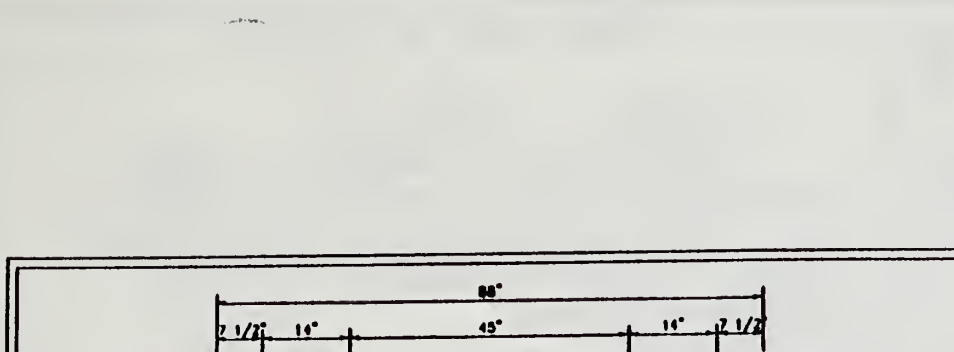
WELL SECTION

NO SCALE



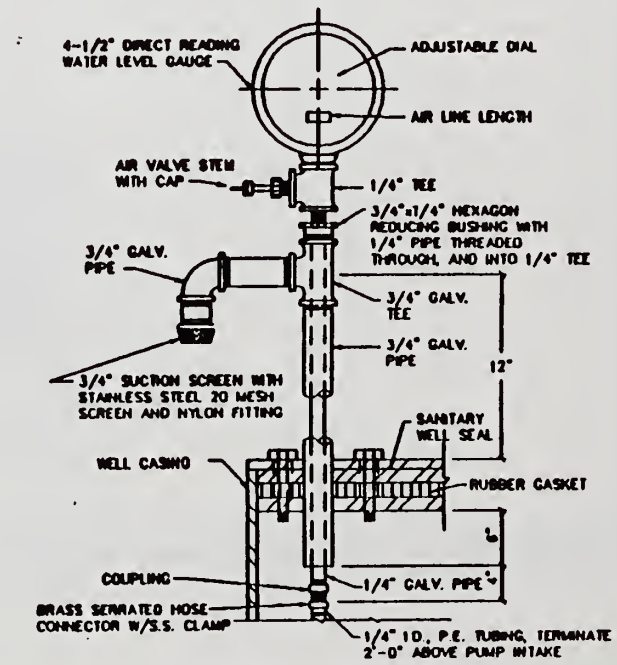
WELL HEAD DETAIL

NO SCALE 51-73 02/29/88



ELECTRICAL MOUNTING CHANNEL DETAIL

NO SCALE ED000137

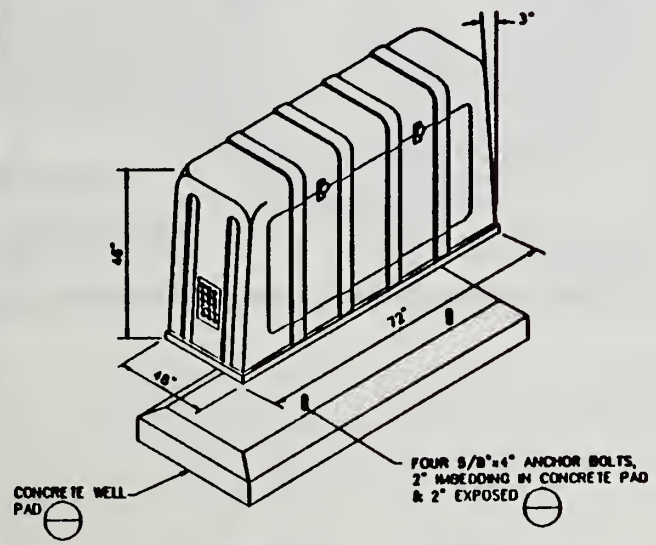


WATER LEVEL GAUGE

NO SCALE 51-76 02/29/88

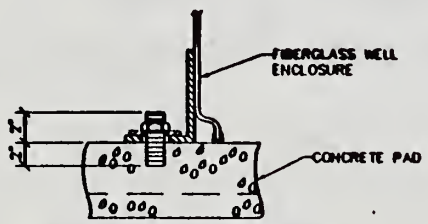
SANITARY WELL SEAL TAPPINGS

NO SCALE 51-75 02/29/88



FIBERGLASS WELL ENCLOSURE

NO SCALE



GALVANIZED STEEL CLIPS ARE MOLDED TO INSIDE FACE OF THE ENCLOSURE TO COINCIDE WITH ANCHOR BOLT LOCATIONS.

FIBERGLASS ENCLOSURE ANCHOR BOLT & HOLD DOWN CLIPS

NO SCALE ED000052

C0000600

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION SIX
THE PACIFIC NORTHWEST REGION

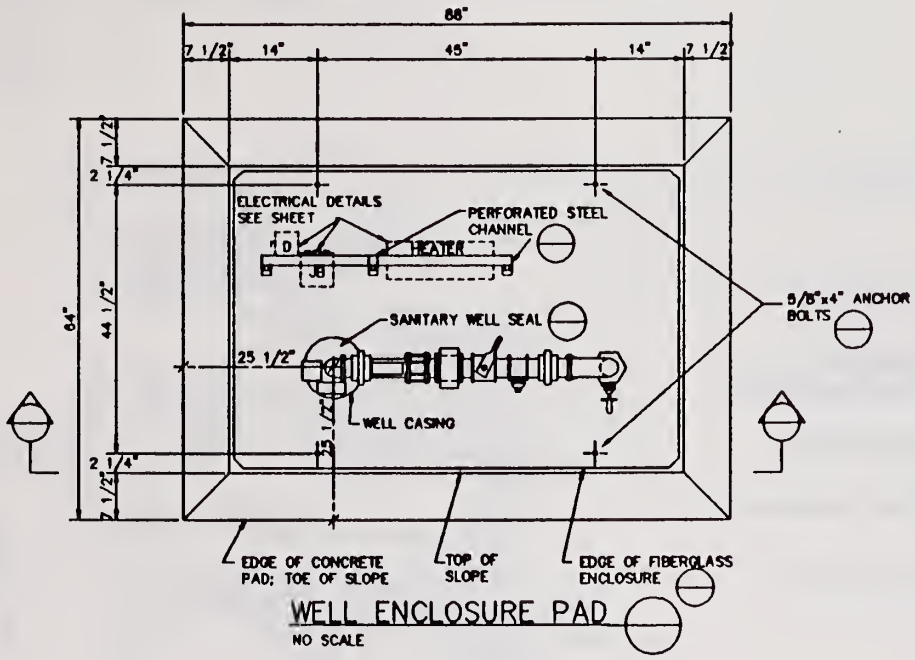
APPROVED		DRAWN	DATE
RECOMMENDED		DESIGNED	DATE
		CHECKED	DATE
		MEMO	DATE

WELL, MECHANICAL AND TRANSCLOSURE DETAILS

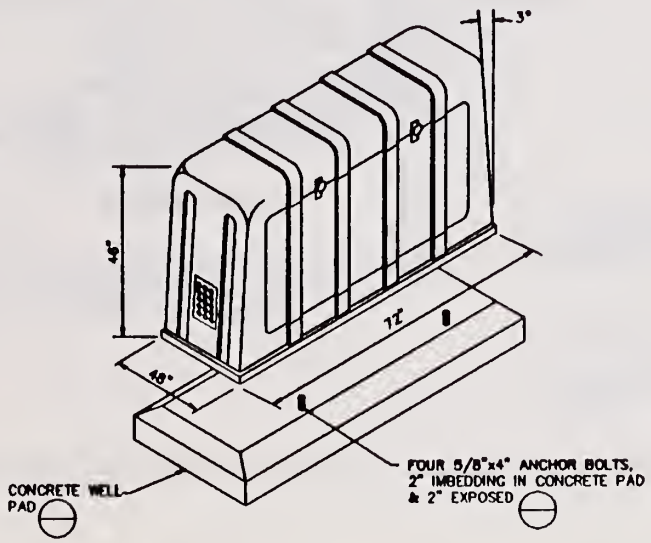
SHT 1 OF 1

FIBERGLASS WELL ENCLOSURE
NO SCALE

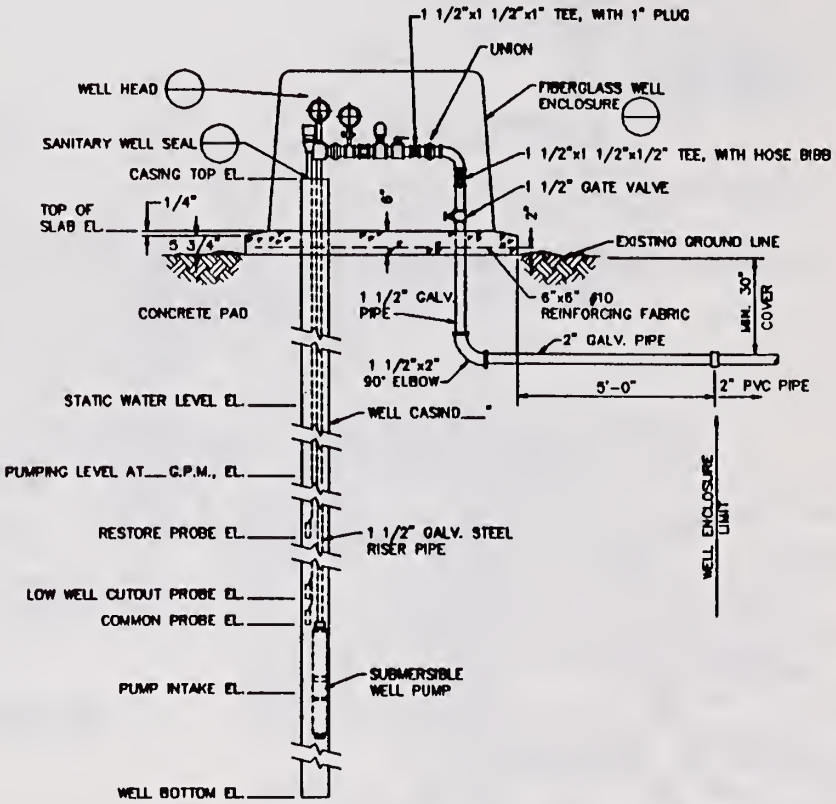
FIBERGLASS ENCLOSURE ANCHOR BOLT & HOLD DOWN CLIPS
NO SCALE ED000052



WELL ENCLOSURE PAD
NO SCALE



FIBERGLASS WELL ENCLOSURE
NO SCALE ED000051 FEB. 14,1986



WELL SECTION
NO SCALE

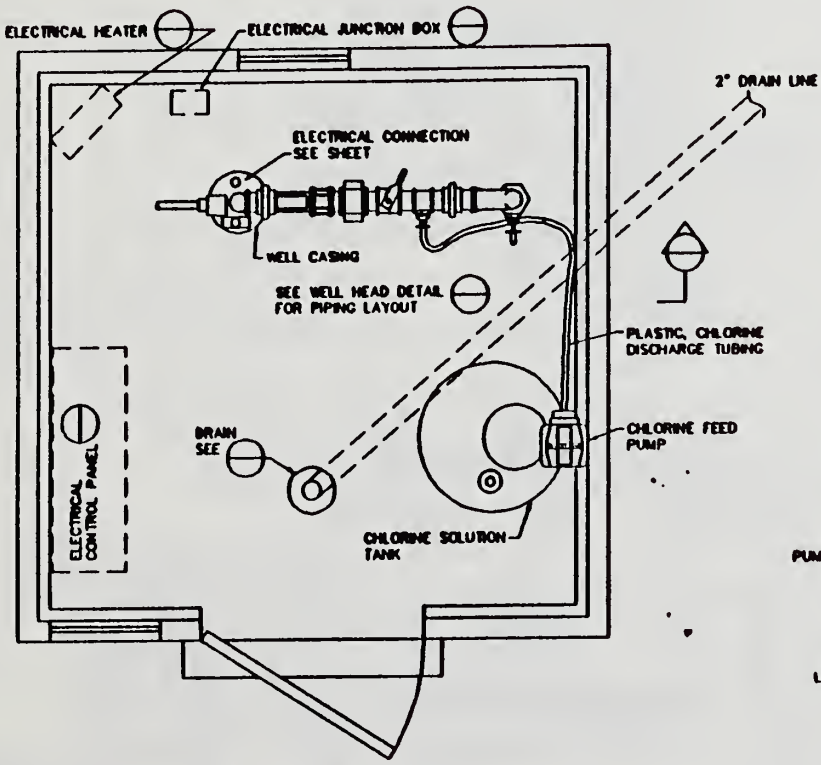
C0000601
11/21/86

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

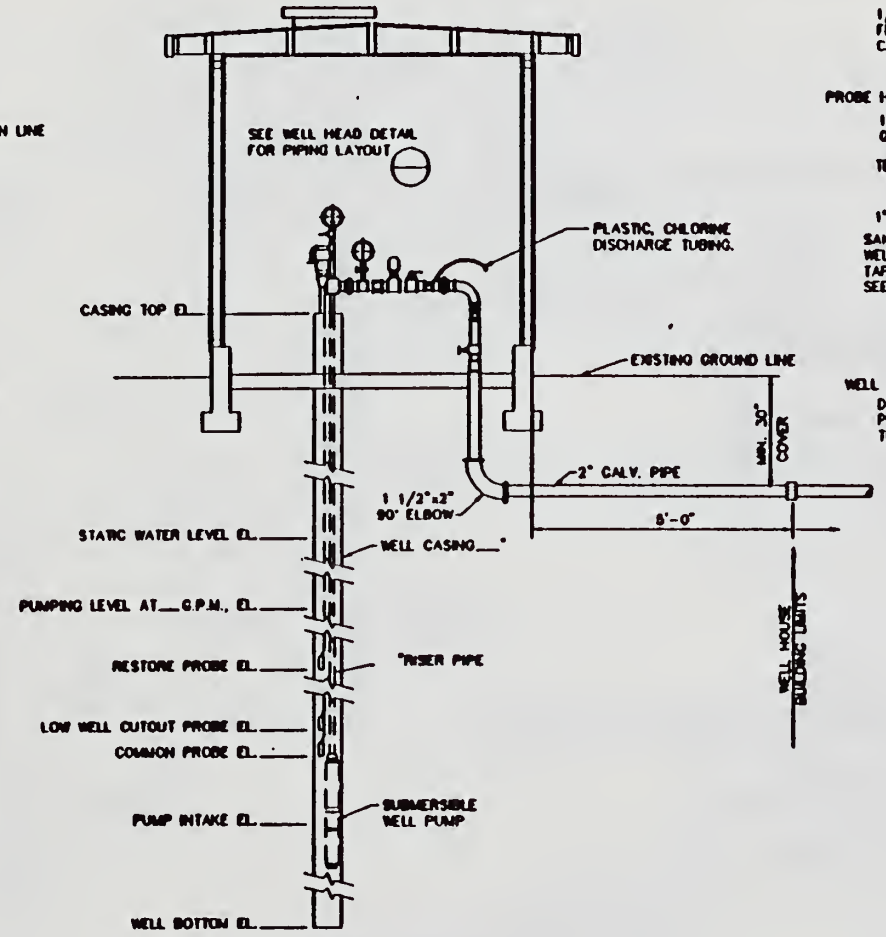
DRAWN ____ DATE
DESIGNED ____ DATE
CHECKED ____ DATE
REVIEWED ____ DATE

WELL, MECHANICAL AND TRANSCLOSURE DETAILS

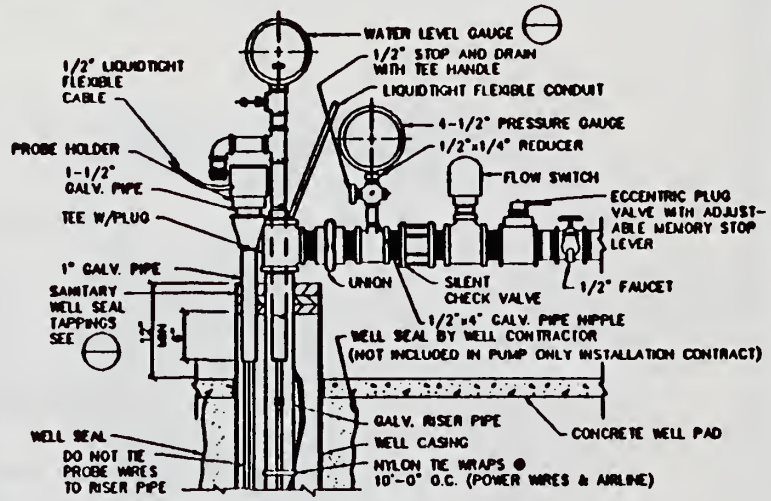
SHT. 12
OF 15



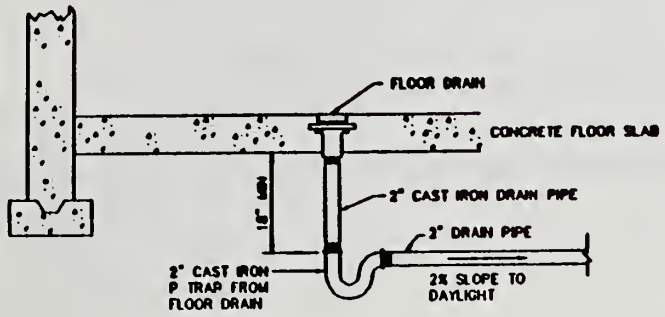
WELL HOUSE
MECHANICAL PLAN
NO SCALE



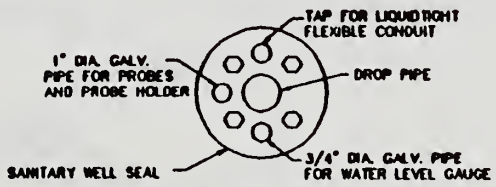
WELL SECTION
NO SCALE



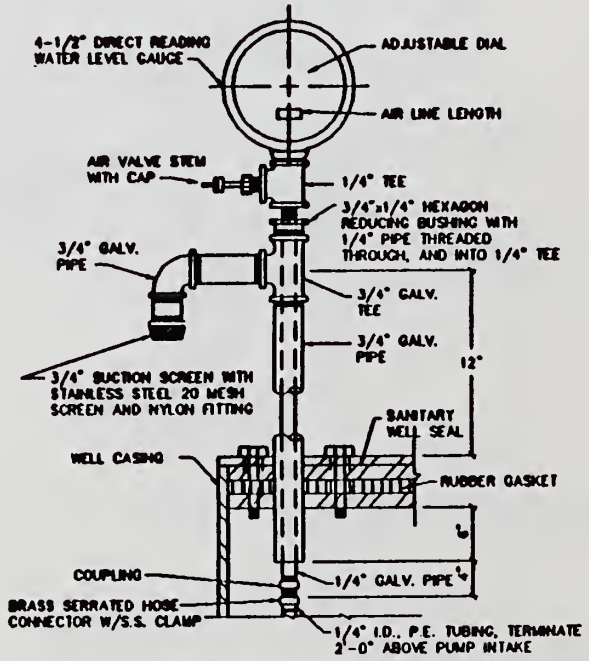
WELL HEAD DETAIL
NO SCALE 51-73 2/29/88



FLOOR DRAIN
SECTION
NO SCALE



SANITARY WELL SEAL TAPPINGS
NO SCALE 51-75 2/29/88



WATER LEVEL GAUGE
NO SCALE 51-76 2/29/88

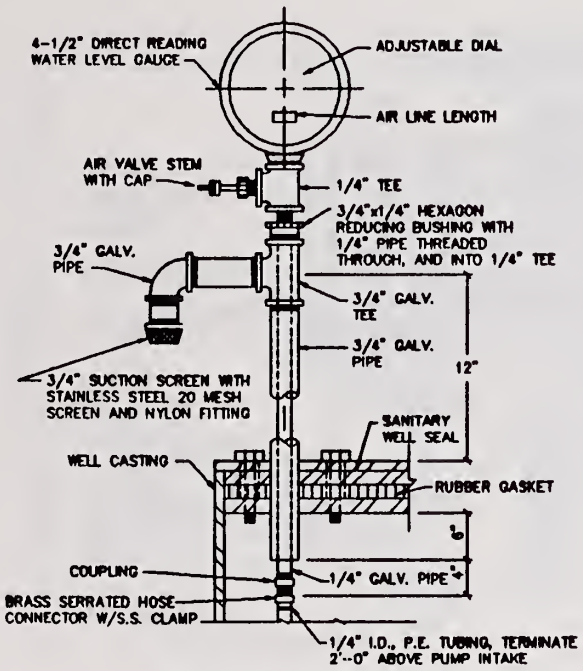
C0000700

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION SIX
THE PACIFIC NORTHWEST REGION

APPROVED		DRAWN D.M.S.	DATE 8/88
RECOMMENDED		DESIGNED W.J.M.	DATE 8/88
		CHECKED W.J.M.	DATE 8/88
		REVIEWED D.Y.	DATE 8/88

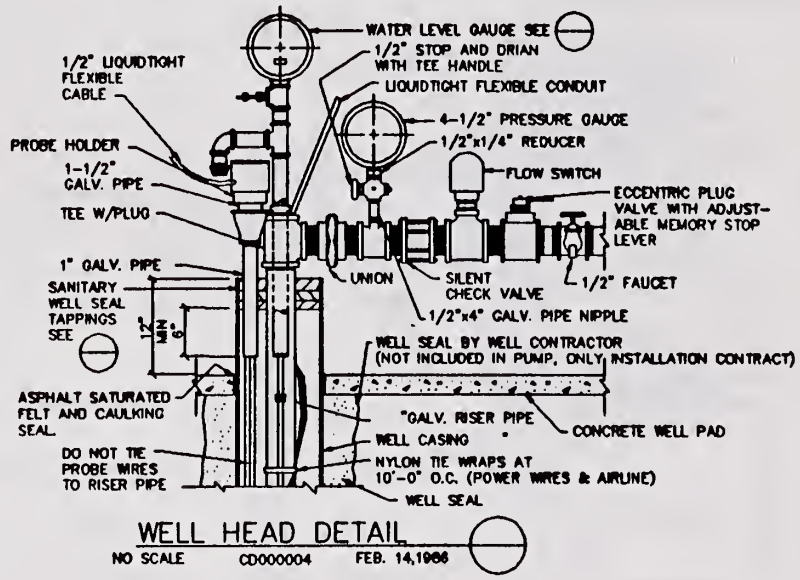
WELL AND WELL H...
MECH. DETAILS (SUBMERSIBLE PUMP)

SHT.	1
OF	2



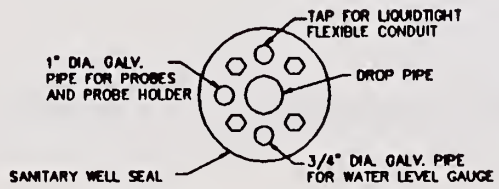
WATER LEVEL GAUGE (D)

NO SCALE CD000003 FEB. 14,1986



WELL HEAD DETAIL

NO SCALE CD000004 FEB. 14,1986



SANITARY WELL SEAL TRAPPINGS

NO SCALE 51-75

C0000701
11/21/86

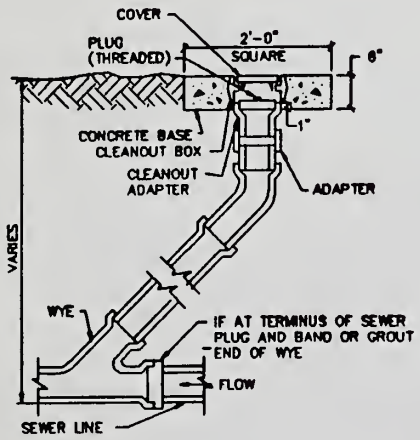
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

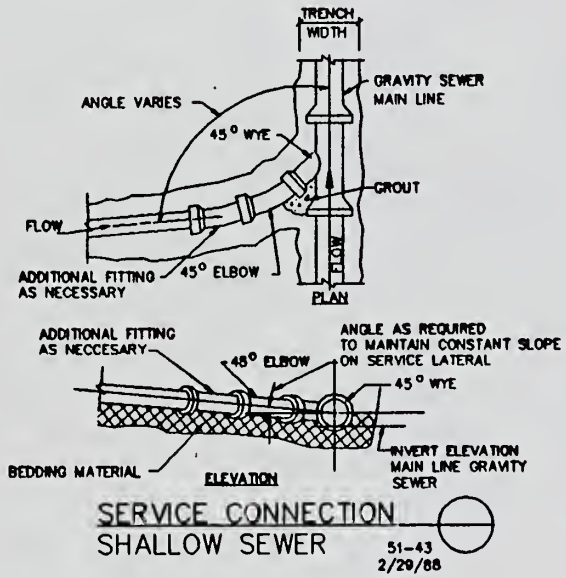
DRAWN	DATE	
DESIGNED	DATE	
CHECKED	DATE	
REVIEWED	DATE	

WELL AND WELL HOUSE
MECH. DETAILS (SUBMERSIBLE PUMP)

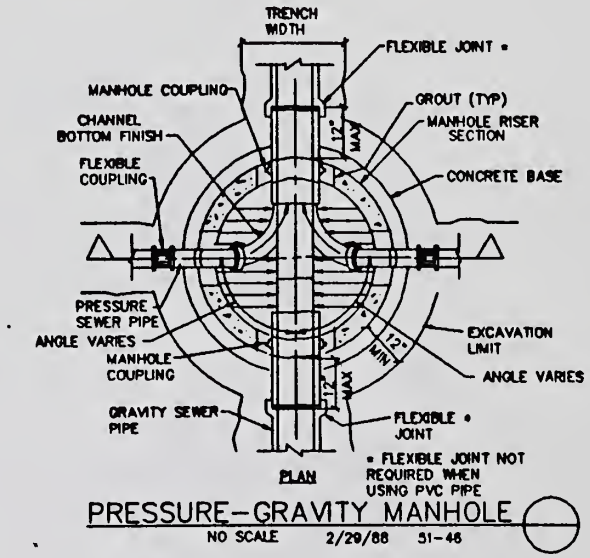
SHT. 10
OF 15



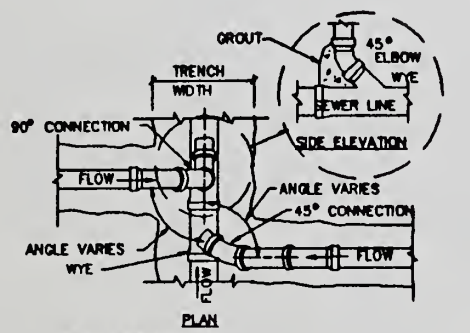
CLEANOUT
2/29/88 51-44



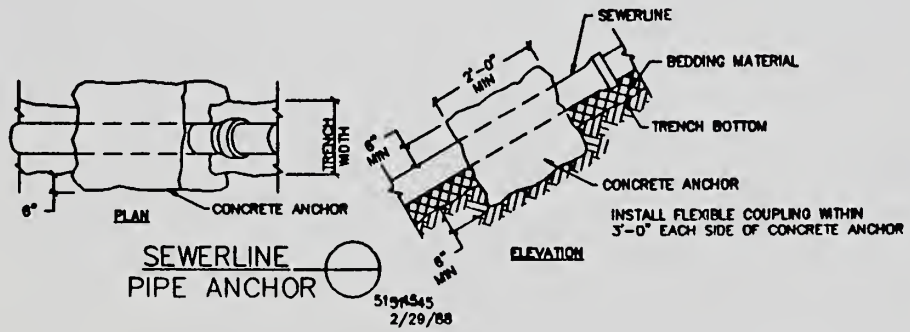
SERVICE CONNECTION
SHALLOW SEWER
51-43
2/29/88



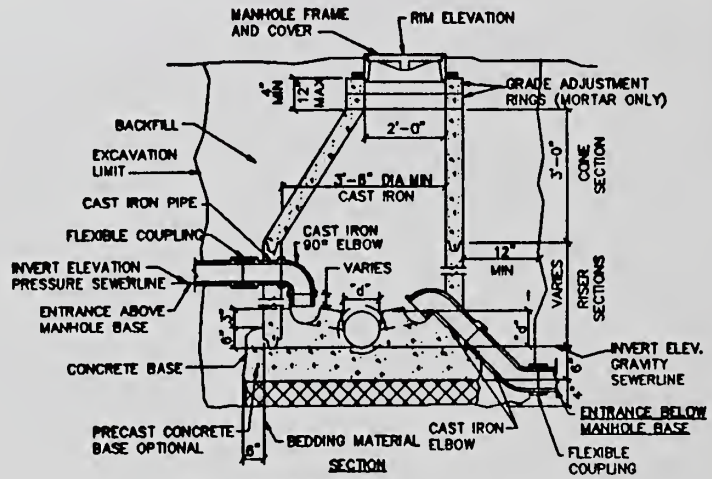
PRESSURE-GRAVITY MANHOLE
NO SCALE 2/29/88 51-46



SERVICE CONNECTION
DEEP SEWER 51-42
2/29/88



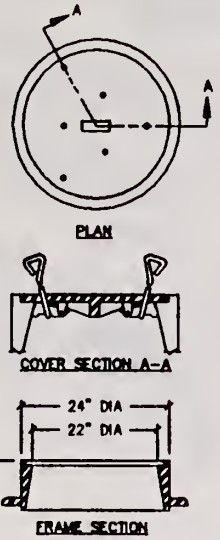
SEWERLINE
PIPE ANCHOR
51-45
2/29/88



PRESSURE-GRAVITY MANHOLE
NO SCALE 51-47
2/29/88

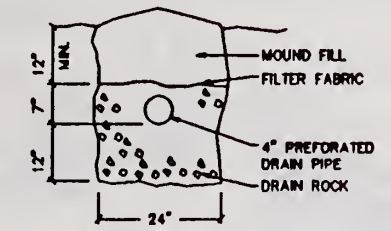
C0001100
5/30/86

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE THE PACIFIC NORTHWEST REGION	SEWERLINES AND APPURTENANCES NOS. 42-47
NO SCALE DRAWN DATE DESIGNED DATE CHECKED DATE REVIEWED DATE	STANDARD S SHT. 6 OF 9



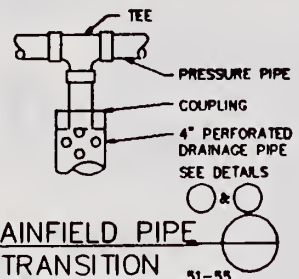
LOCKING M.H. FRAME AND COVER

NO SCALE 51-51 2/29/88



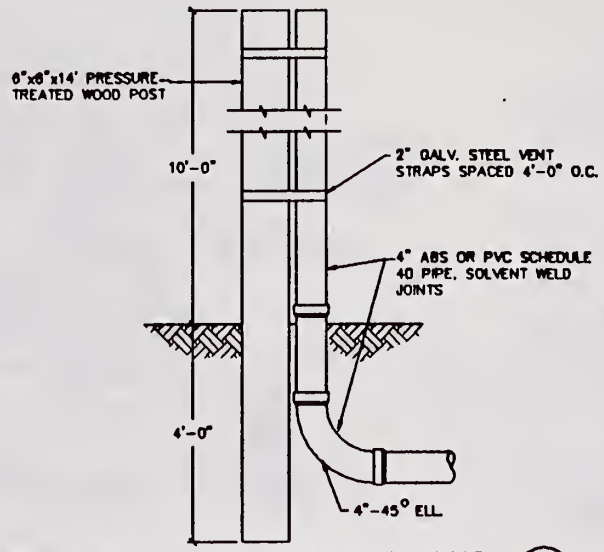
ABSORPTION-TRENCH AND LATERAL

NO SCALE 51-54 2/29/88



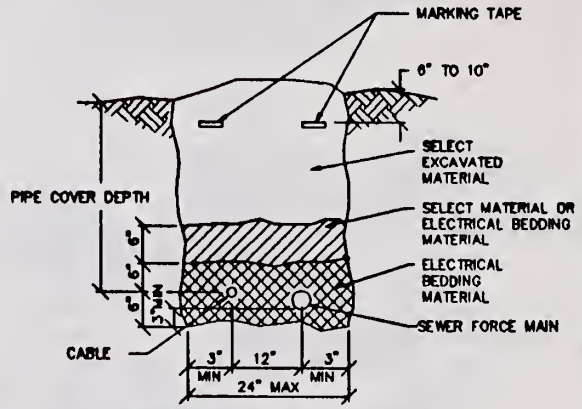
DRAINFIELD PIPE TRANSITION (PRESSURE SYSTEM)

NO SCALE 51-55 2/29/88



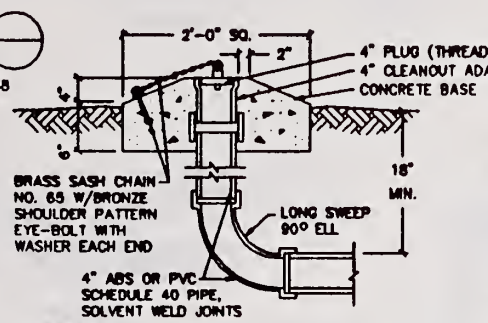
RECREATION VEHICLE VENT

NO SCALE 51-58 2/29/88



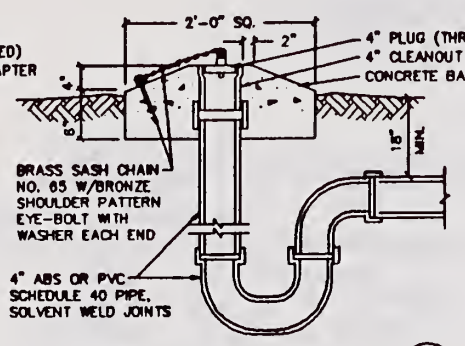
SEWER FORCE MAIN AND TELEPHONE CABLE TRENCH

NO SCALE 51-60 2/29/88



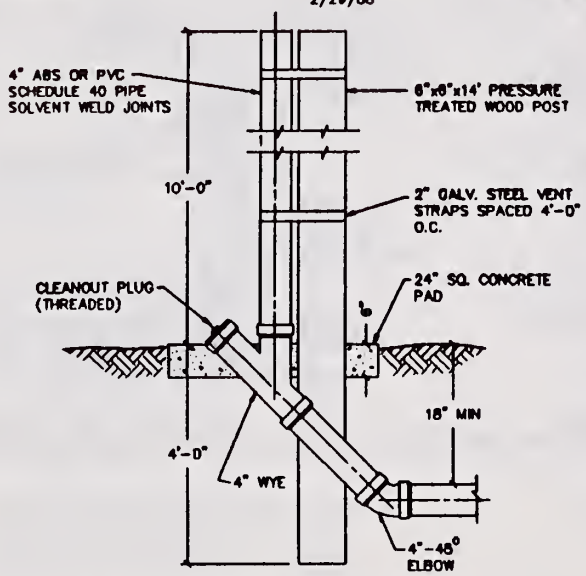
MOBILE HOME SANITARY SEWER HOOKUP

NO SCALE 51-56 2/29/88



RECREATON VEHICLE SEWER HOOKUP

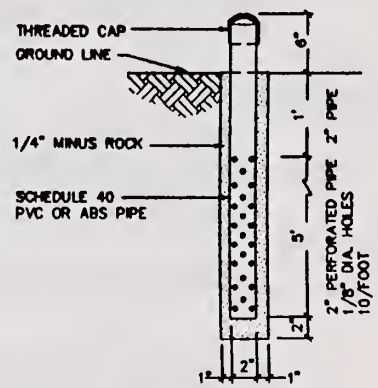
NO SCALE 51-75 2/29/88



RECREATION VEHICLE CLEANOUT & VENT

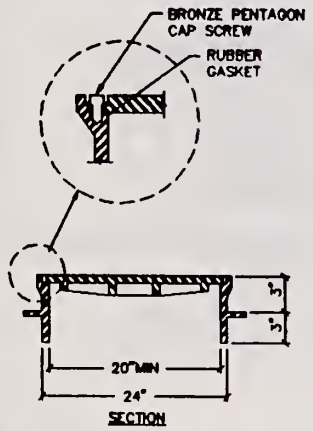
NO SCALE 51-59 2/29/88

C0001200 5/23/88



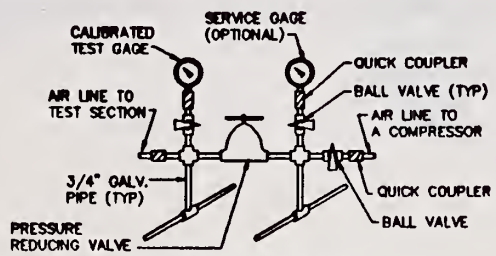
OBSERVATION WELL

NO SCALE 51-61 2/29/88



WATERTIGHT M.H. FRAME AND COVER

NO SCALE 51-52 2/29/88



AIR TEST STAND

NO SCALE 51-53 2/29/88

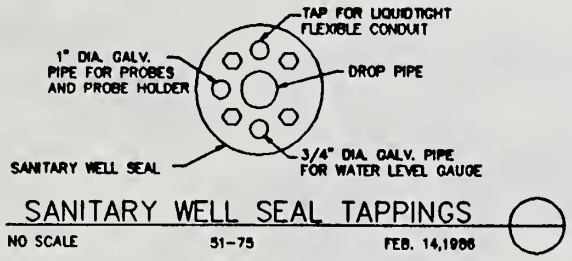
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

SEWERLINES AND APPURTENANCES NOS. 50-61

DRAWN DATE
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

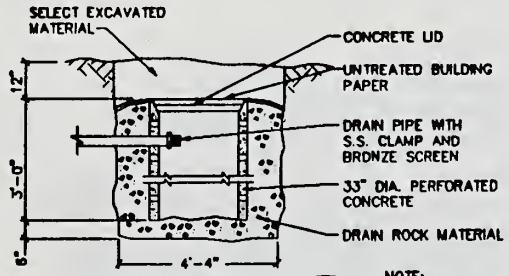
STANDARD DETAILS

SHT. 7
OF 9



SANITARY WELL SEAL TAPPINGS

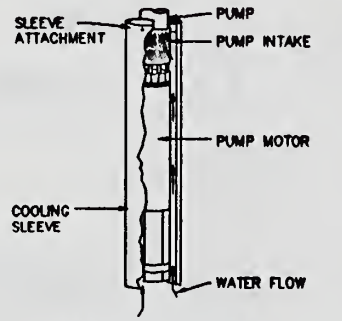
NO SCALE 51-75 FEB. 14,1986



DRY WELL

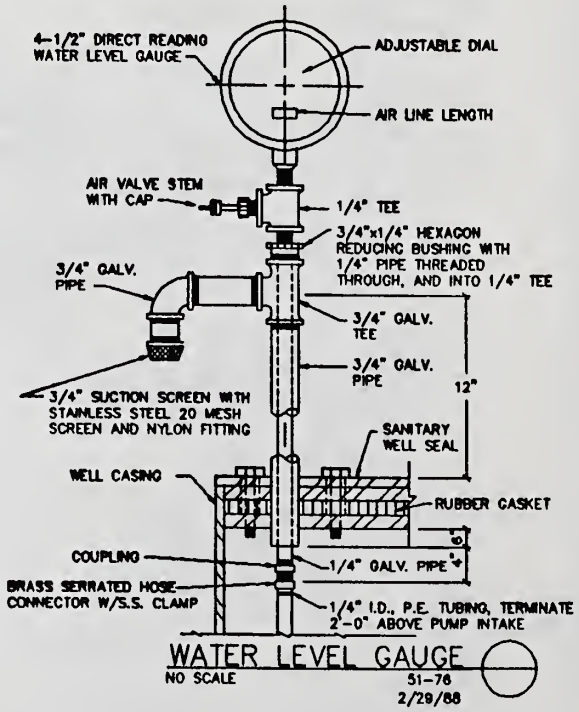
NO SCALE 51-78 2/29/88

NOTE: FOR USE WITH HAND PUMPS ONLY.



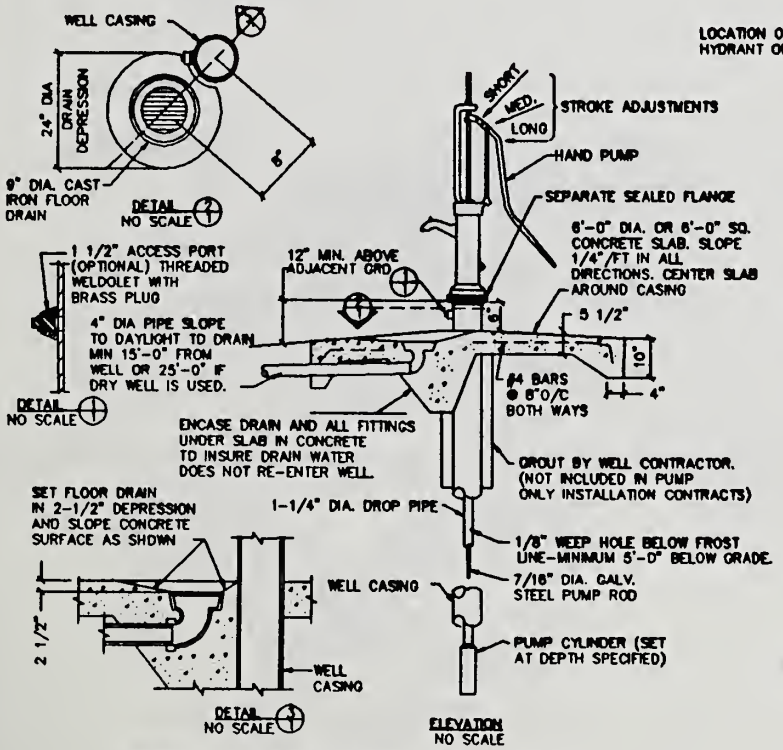
COOLING SLEEVE

NO SCALE 51-79 2/29/88



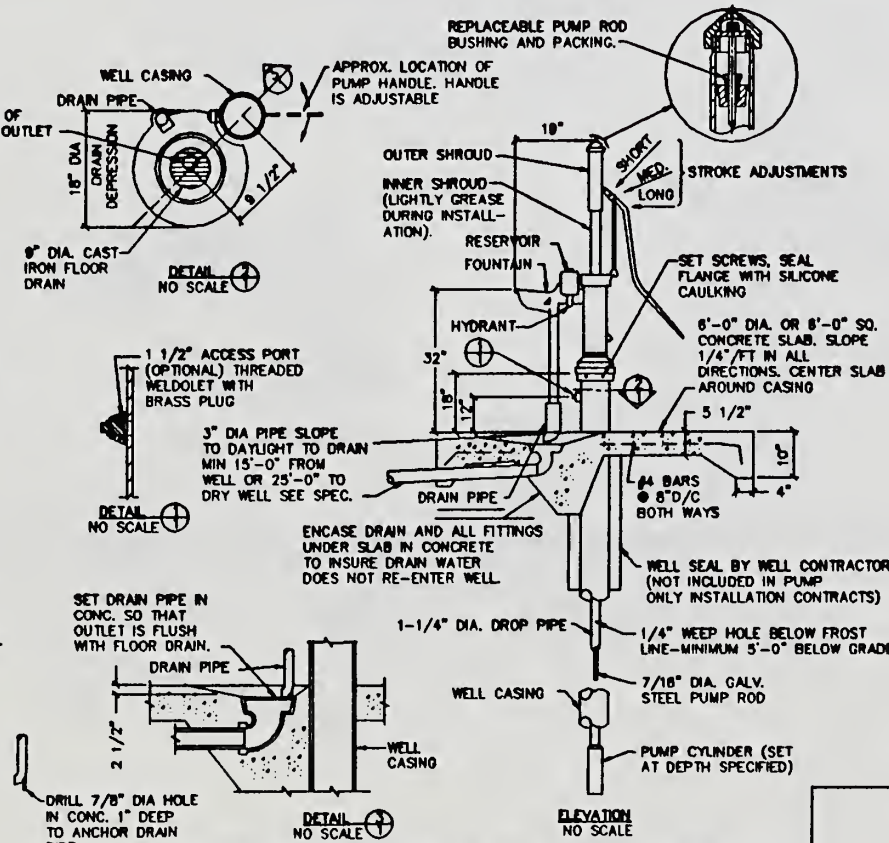
WATER LEVEL GAUGE

NO SCALE 51-76 2/29/88



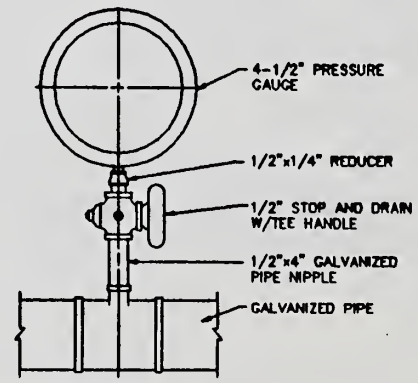
SPIGOT TYPE HAND PUMP AND SLAB

NO SCALE 51-72 2/29/88



DRINKING-FOUNTAIN TYPE HAND PUMP AND S

NO SCALE 51-71 2/29/88



PRESSURE GAUGE

NO SCALE 51-77 2/29/88

C0001300
5/28/86

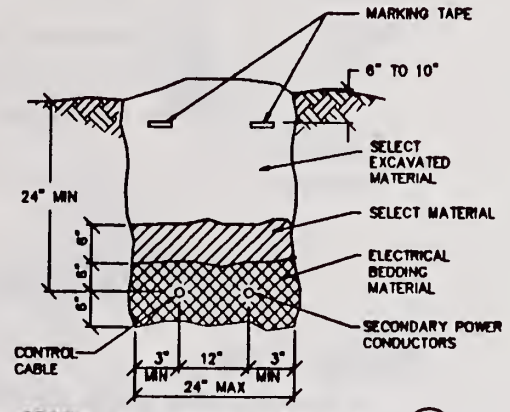
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

DRAWN DATE
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

PUMPS AND WELLS NOS. 71,72,75-79

STANDARD S

SHT. 8
OF 9

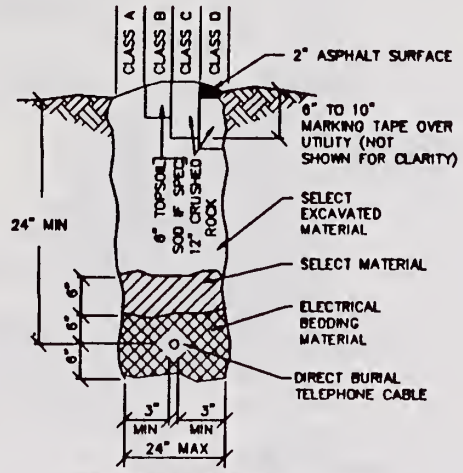


SECONDARY POWER CONDUCTORS & CONTROL CABLE TRENCH

(CLASS A BACKFILL)

NO SCALE

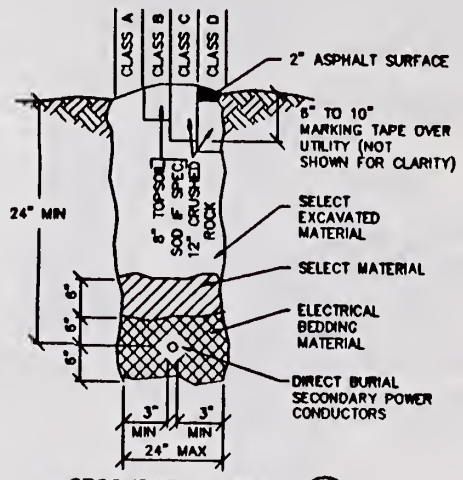
51-81
2/29/88



TELEPHONE CABLE TRENCH

NO SCALE

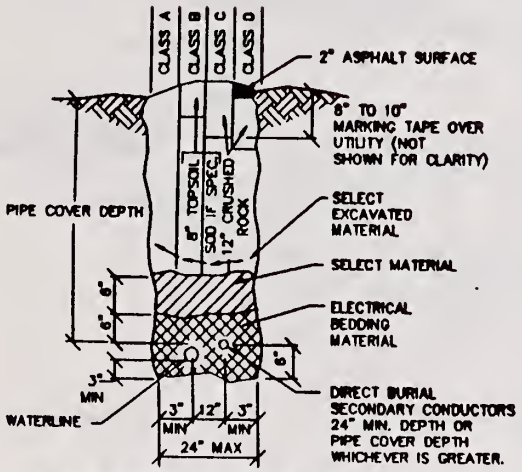
51-84
2/29/88



SECONDARY POWER CONDUCTORS TRENCH

NO SCALE

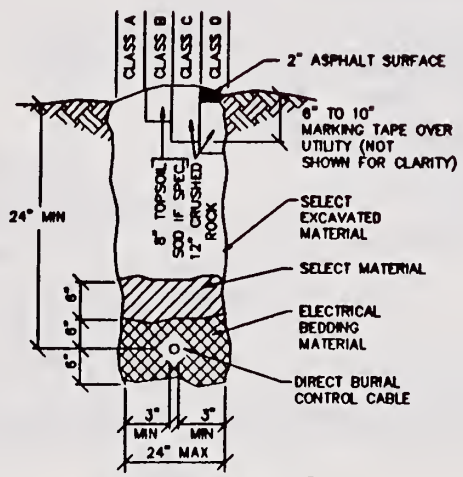
51-82
2/29/88



WATERLINE & SECONDARY POWER CONDUCTORS TRENCH

NO SCALE

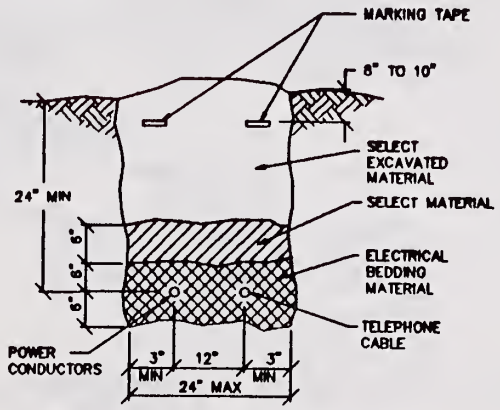
51-85
2/29/88



CONTROL CABLE TRENCH

NO SCALE

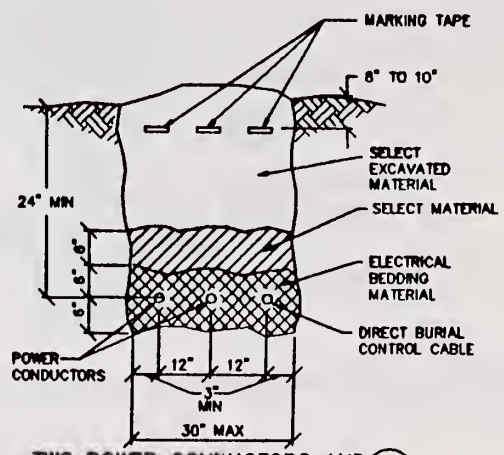
51-83
2/29/88



POWER CONDUCTORS AND TELEPHONE CABLE TRENCH

NO SCALE (CLASS A BACKFILL)

51-86
2/29/88



TWO POWER CONDUCTORS AND TELEPHONE CABLE TRENCH

NO SCALE (CLASS A BACKFILL)

51-87
2/29/88

C0001400
8/19/86

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

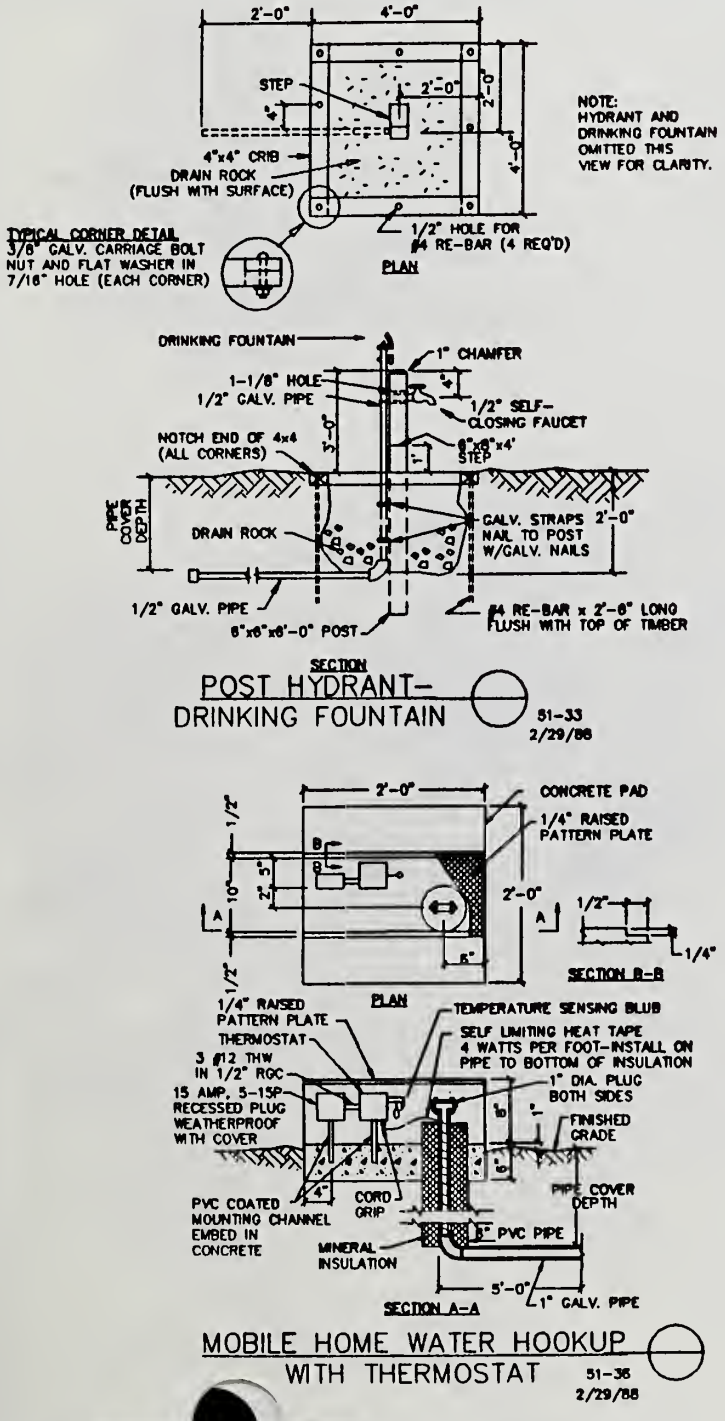
THE PACIFIC NORTHWEST REGION

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REVIEWED ____ DATE ____

ELECTRICAL TRENCH NOS. 81-87

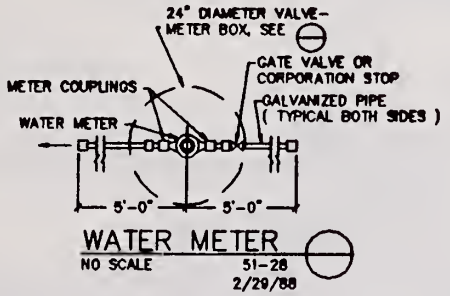
STANDARD DETAILS

SHT. 9
OF 9



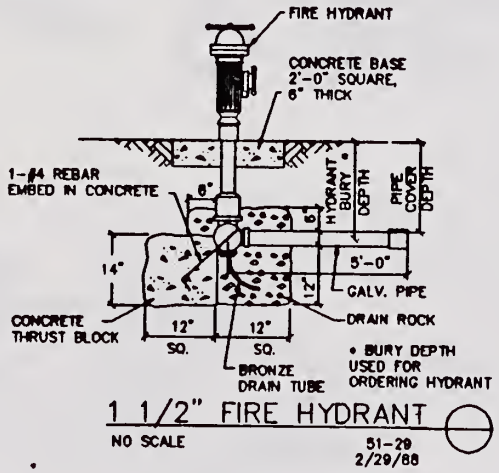
C0001500
5/30/86

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE THE PACIFIC NORTHWEST REGION		WATERLINES AND APPURTENANCES NOS. 33-34, 36-38 SEWERLINES AND APPURTENANCES NO. 41
NO SCALE	DRAWN ____ DATE ____ DESIGNED ____ DATE ____ CHECKED ____ DATE ____ REVIEWED ____ DATE ____	STANDARD D…S SHT. 4 OF 9



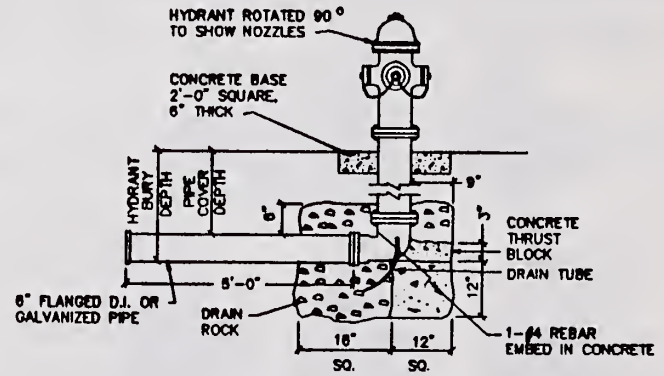
WATER METER

NO SCALE 51-28 2/29/88



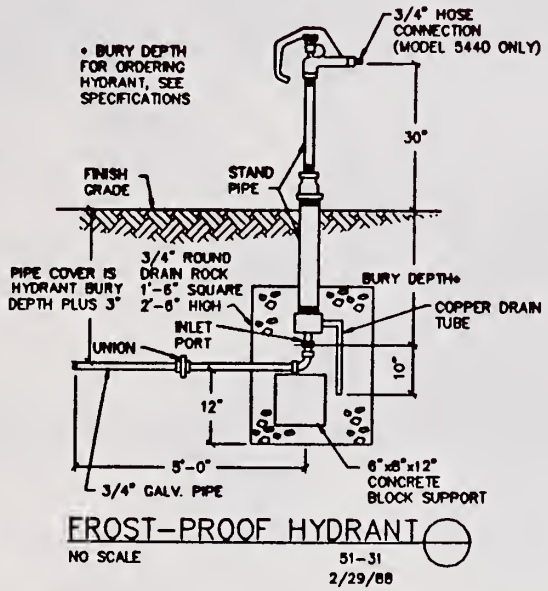
1 1/2" FIRE HYDRANT

NO SCALE 51-29 2/29/88



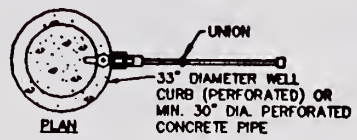
4 1/2" FIRE HYDRANT

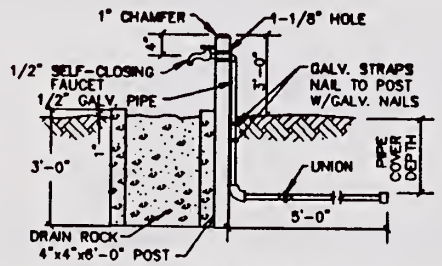
NO SCALE 51-30 2/29/88



FROST-PROOF HYDRANT

NO SCALE 51-31 2/29/88



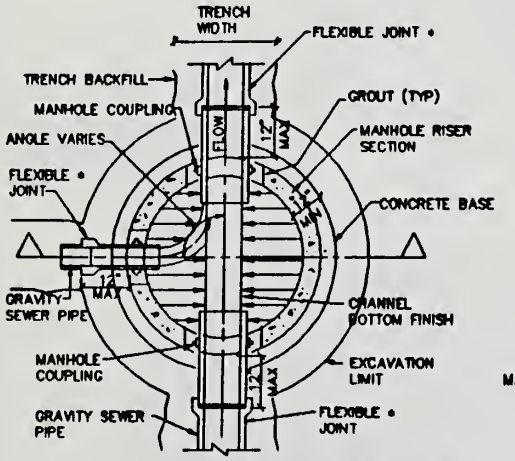


POST HYDRANT WITH SUMP

NO SCALE 51-32 2/29/88

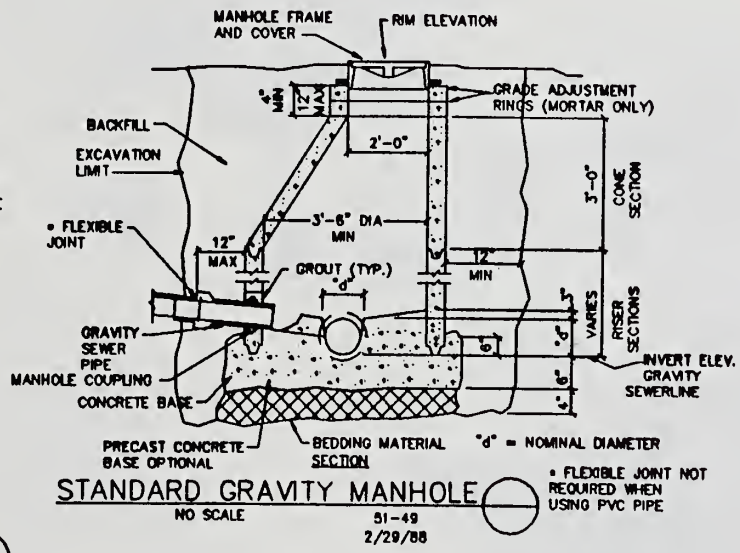
C0001600
5/30/88

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE THE PACIFIC NORTHWEST REGION		WATERLINES AND APPURTENANCES NOS. 26-32
	DRAWN ____ DATE ____ DESIGNED ____ DATE ____ CHECKED ____ DATE ____ REVIEWED ____ DATE ____	STANDARD DETAILS — SHT. 3 OF 9



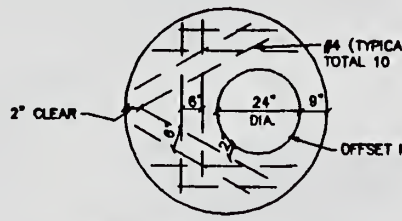
STANDARD GRAVITY MANHOLE

NO SCALE 51-48 2/29/88



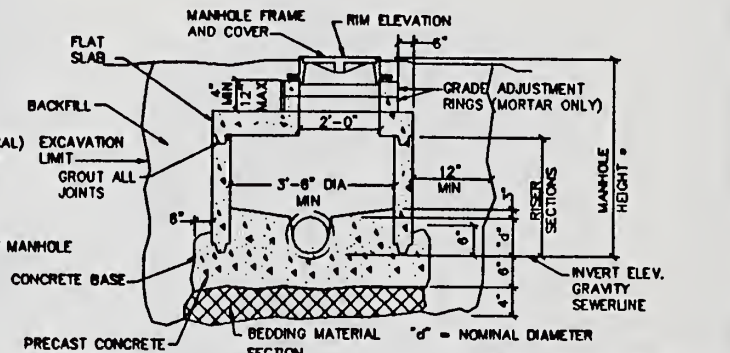
STANDARD GRAVITY MANHOLE

NO SCALE 51-49 2/29/88



PRECAST CONCRETE FLAT SLAB

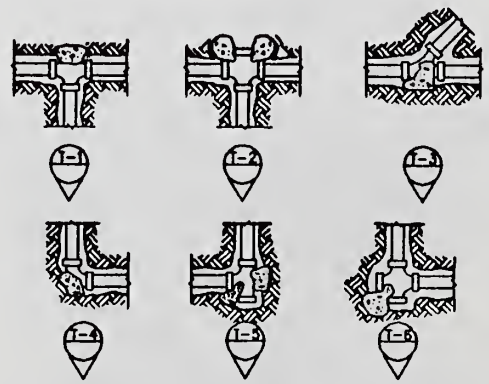
NO SCALE

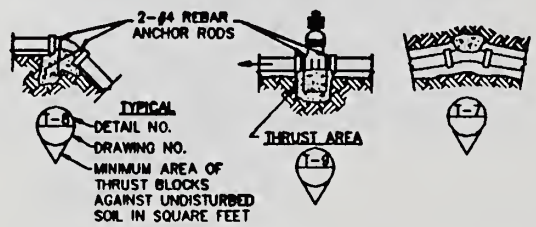


FLAT SLAB MANHOLE

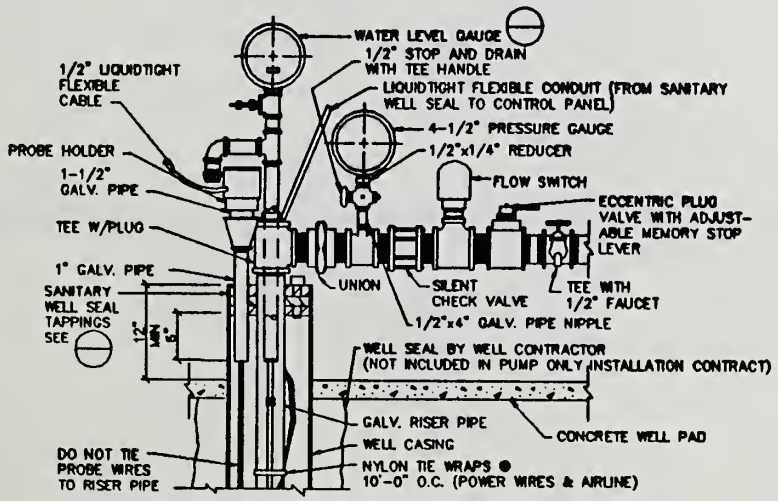
NO SCALE 51-50 2/29/88

• 5'-0" OR LESS USE FLAT SLAB MANHOLE, OVER 5'-0" USE STANDARD MANHOLE



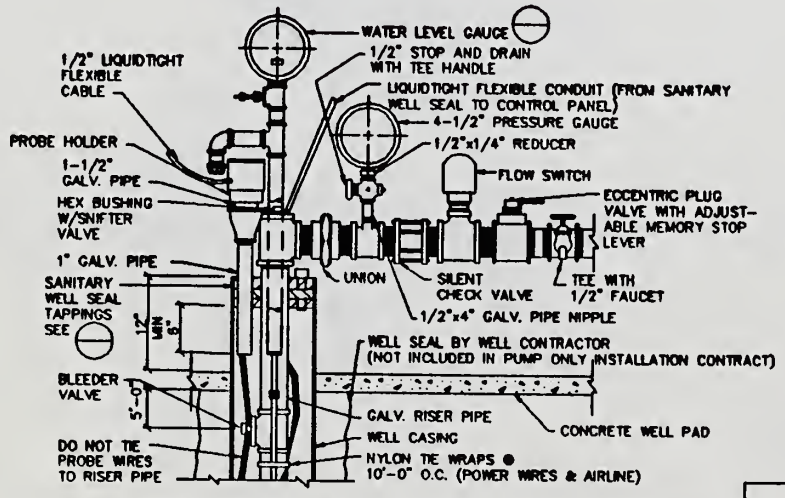


CONCRETE THRUST BLOCKS AND PIPE ANCHORS 51-35 2/29/88



WELL HEAD DETAIL

NO SCALE 51-73 2/29/88



WELL HEAD DETAIL WITH BLEEDER VALVE

NO SCALE

C0001601 5/28/88

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THE PACIFIC NORTHWEST REGION

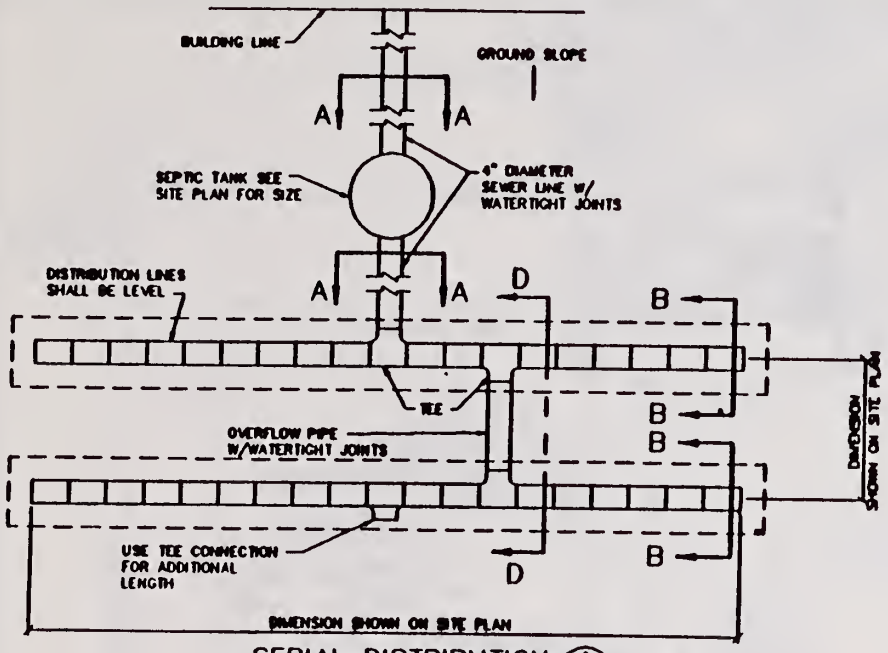
DRAWN DATE
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

WATERLINES NO. 35
SEWERLINES NOS. 48,49,50
WELLS NOS. 73,74

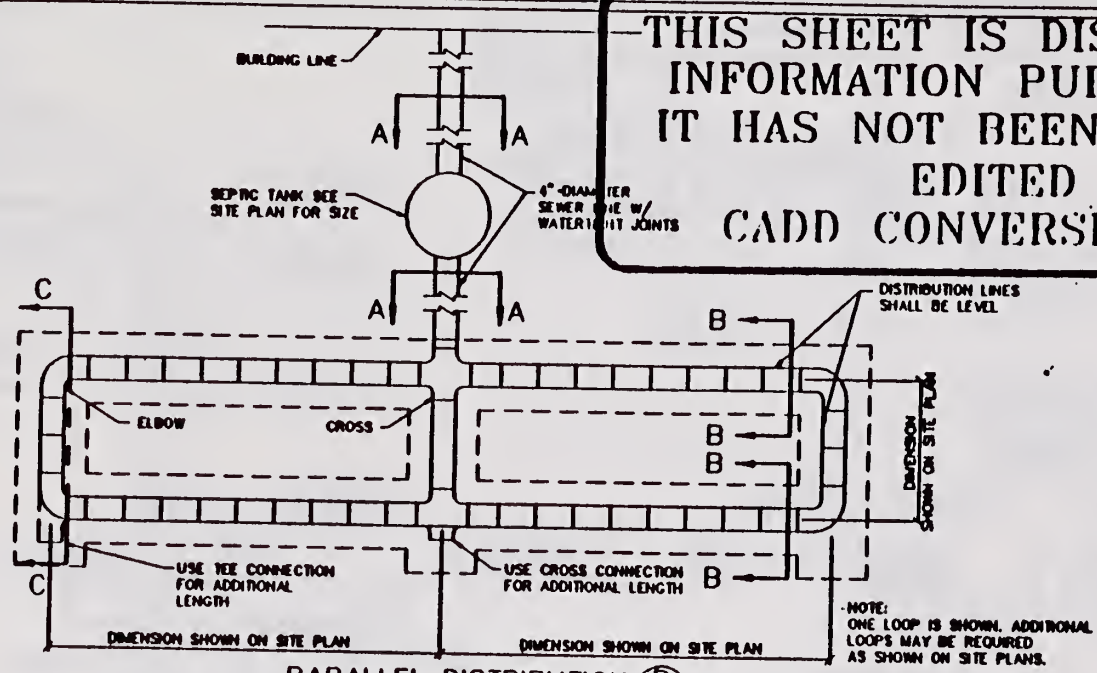
STANDARD [illegible]S

SHT. 5
OF 9

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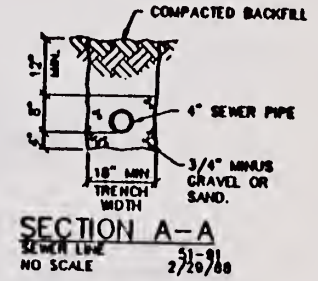


SERIAL DISTRIBUTION (A) S/1 51-95
SLOPING GROUND
NO SCALE 51-95 2/29/88

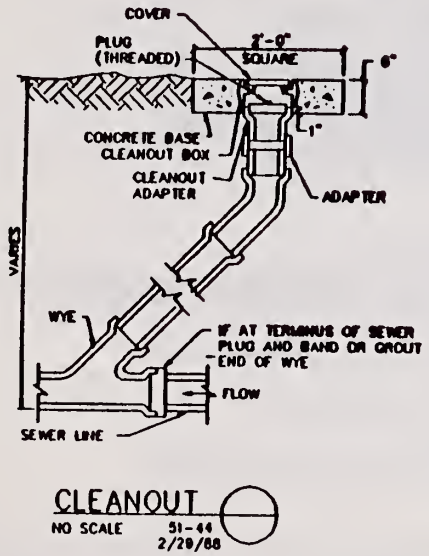


PARALLEL DISTRIBUTION (B) S/1
LEVEL GROUND
NO SCALE 51-90 2/29/88

NOTE:
ONE LOOP IS SHOWN. ADDITIONAL LOOPS MAY BE REQUIRED AS SHOWN ON SITE PLANS.

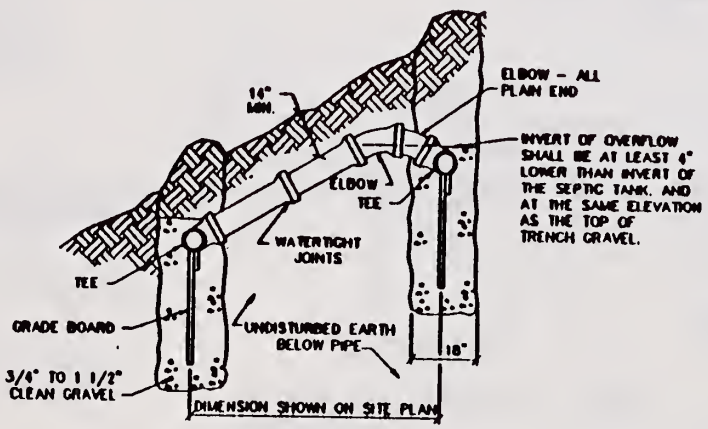


SECTION A-A
SEWER LINE 51-91 2/29/88
NO SCALE

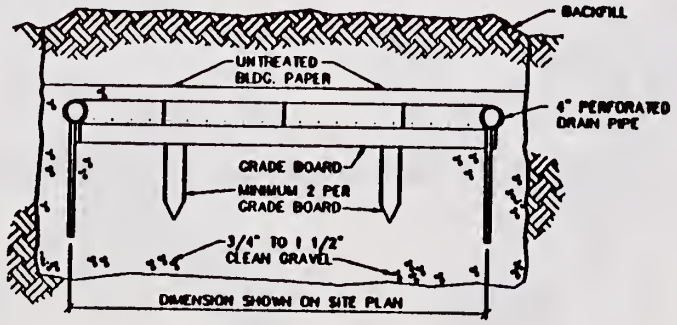


CLEANOUT (51-44)
NO SCALE 2/29/88

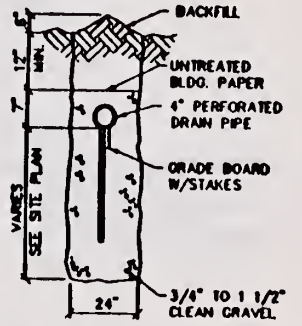
NOTE: SEE PLANS FOR ELEVATIONS, DIMENSIONS, AND CONFIGURATIONS.



SECTION D-D
NO SCALE 51-94 2/29/88



SECTION C-C
SEWAGE EFFLUENT DRAIN LINES
NO SCALE 51-93 2/29/88



SECTION B-B
SEWAGE EFFLUENT DRAIN LINES
NO SCALE 51-92 2/29/88

C0001700
FEB. 11,1987

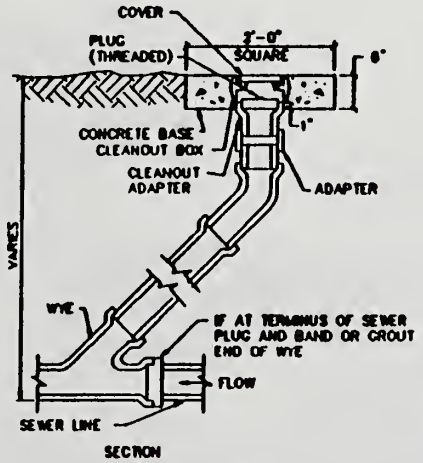
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION SIX
THE PACIFIC NORTHWEST REGION

APPROVED
RECOMMENDED

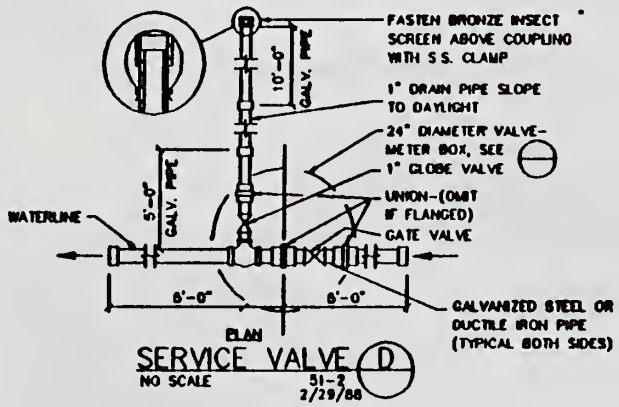
DRAWN DATE
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

DRAINFIELD DETAILS

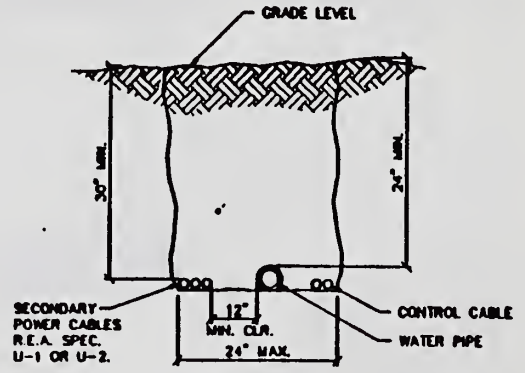
SHT 1
OF 1



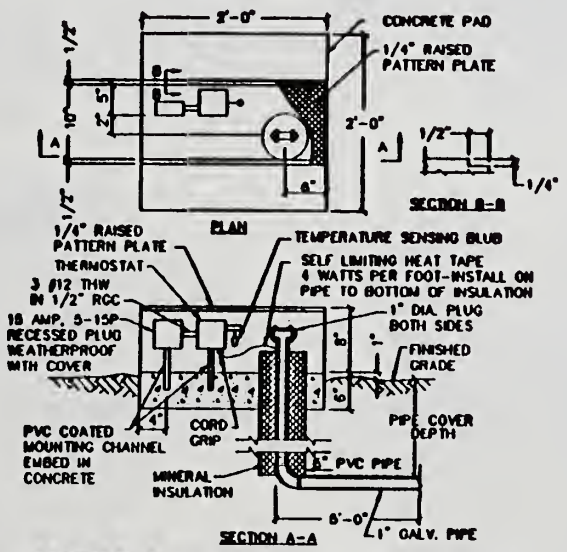
CLEANOUT (M)
51-44
2/29/88



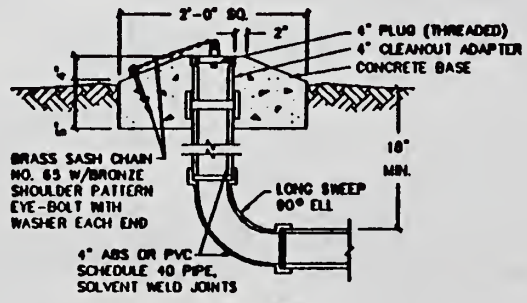
SERVICE VALVE (D)
NO SCALE
51-2
2/29/88



UTILITY TRENCH (I)
NO SCALE



MOBILE HOME WATER HOOKUP (C)
WITH THERMOSTAT
51-36
2/29/88



MOBILE HOME SANITARY SEWER HOOKUP (B)
NO SCALE
51-56
2/29/88

NOTE:
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH N.E.S. HANDBOOK 81, AND STATE AND LOCAL CODES.

C0001900
FEB.25,1987

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FOREST SERVICE
REGION SIX
THE PACIFIC NORTHWEST REGION

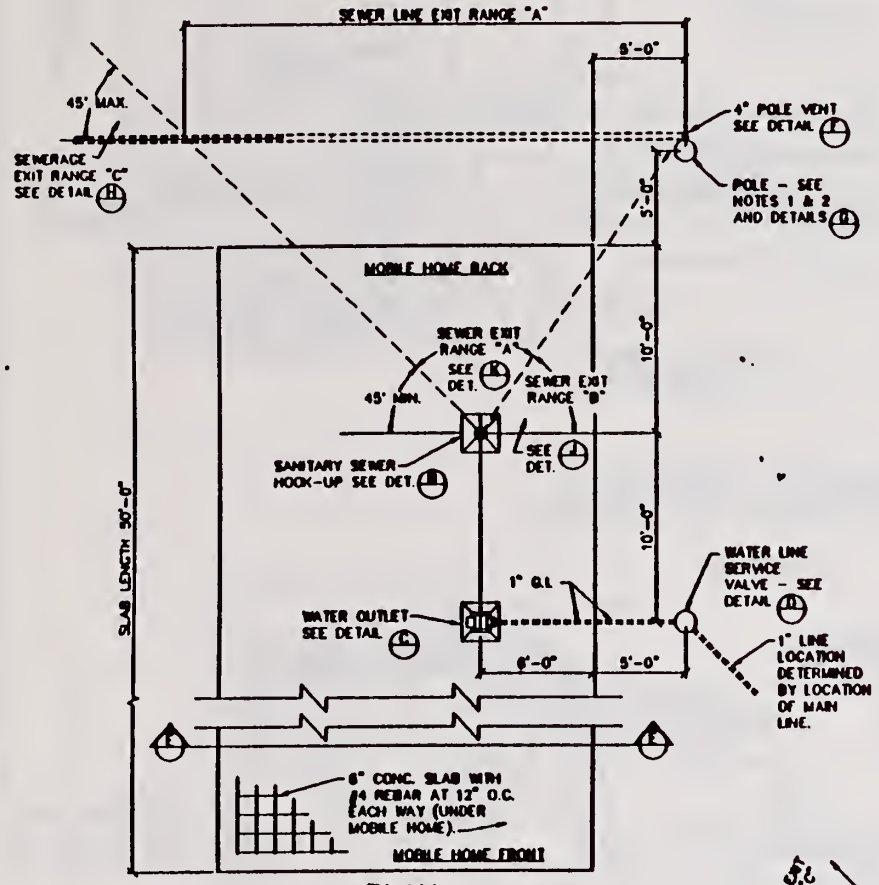
APPROVED
RECOMMENDED

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DESIGNED ____ DATE ____
CHECKED ____ DATE ____
REVIEWED ____ DATE ____

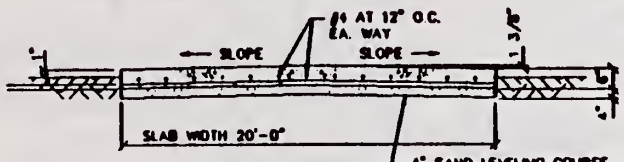
MOBILE HOME UTILITIES

SHT 2
OF 2

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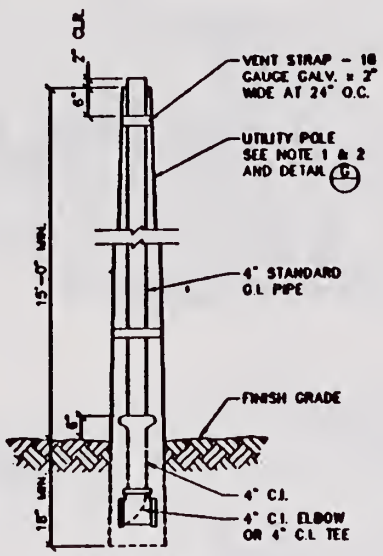
PLAN



SECTION E

MOBILE HOME UTILITY PLAN A

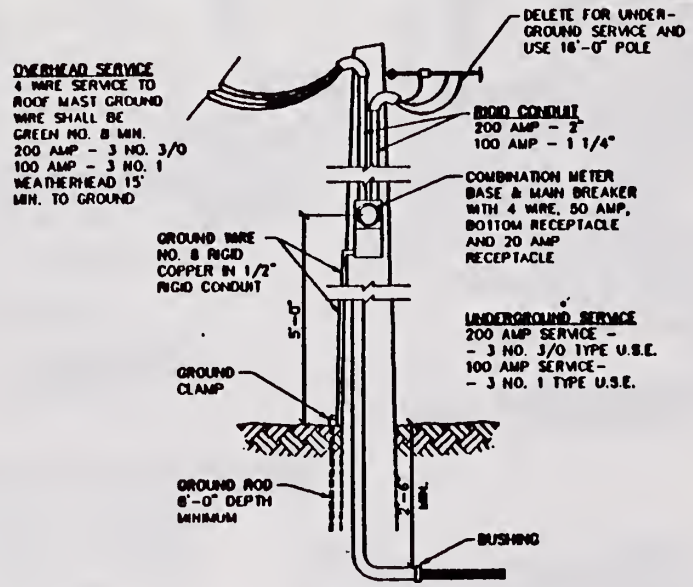
SCALE: 1/4"=1'-0"



FRONT ELEVATION

UTILITY POLE F

SCALE: 3/4"=1'-0"

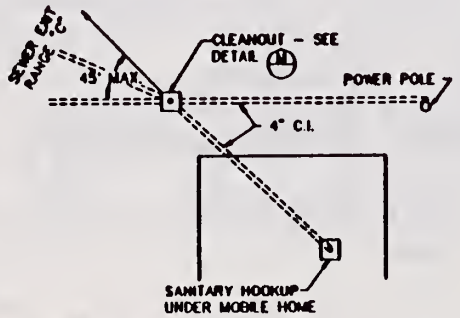


FRONT ELEVATION

ELECTRICAL SERVICE G

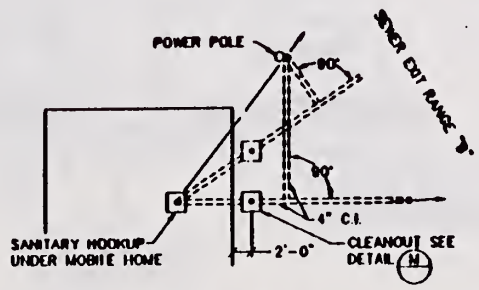
SCALE: 3/4"=1'-0"

NOTES:
1. VERTICAL CLEARANCE DRIVES & OTHERS 12'-0" BUILDING & TRAILERS CLEARANCE 8'-0".
2. HORIZONTAL - CLEARANCE 8'-0".



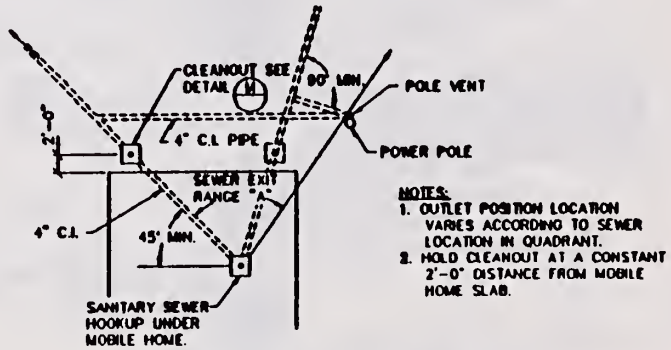
SEWER EXIT RANGE "C" H

SCALE: 1/8"=1'-0"



SEWER EXIT RANGE "B" J

SCALE: 1/8"=1'-0"



NOTES:
1. OUTLET POSITION LOCATION VARIES ACCORDING TO SEWER LOCATION IN QUADRANT.
2. HOLD CLEANOUT AT A CONSTANT 2'-0" DISTANCE FROM MOBILE HOME SLAB.

SEWER EXIT RANGE "A" K

SCALE: 1/8"=1'-0"

NOTES:
1. ALL POLES SHALL BE PRESSURE TREATED WITH PENTACHLOROPHENOL IN ACCORDANCE WITH F.S. TT-W-571, 8# / FT 3 NET RETENTION.
2. ALL POLES SHALL BE 24'-0", CLASS 4 MIN. UNLESS OTHERWISE SHOWN ON PLANS OR SUPPLEMENTAL SPECIFICATIONS.
3. WIRE SIZE SHALL BE SHOWN ON THE PLANS.
4. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH N.E.S. HANDBOOK 81, AND STATE AND LOCAL CODES.

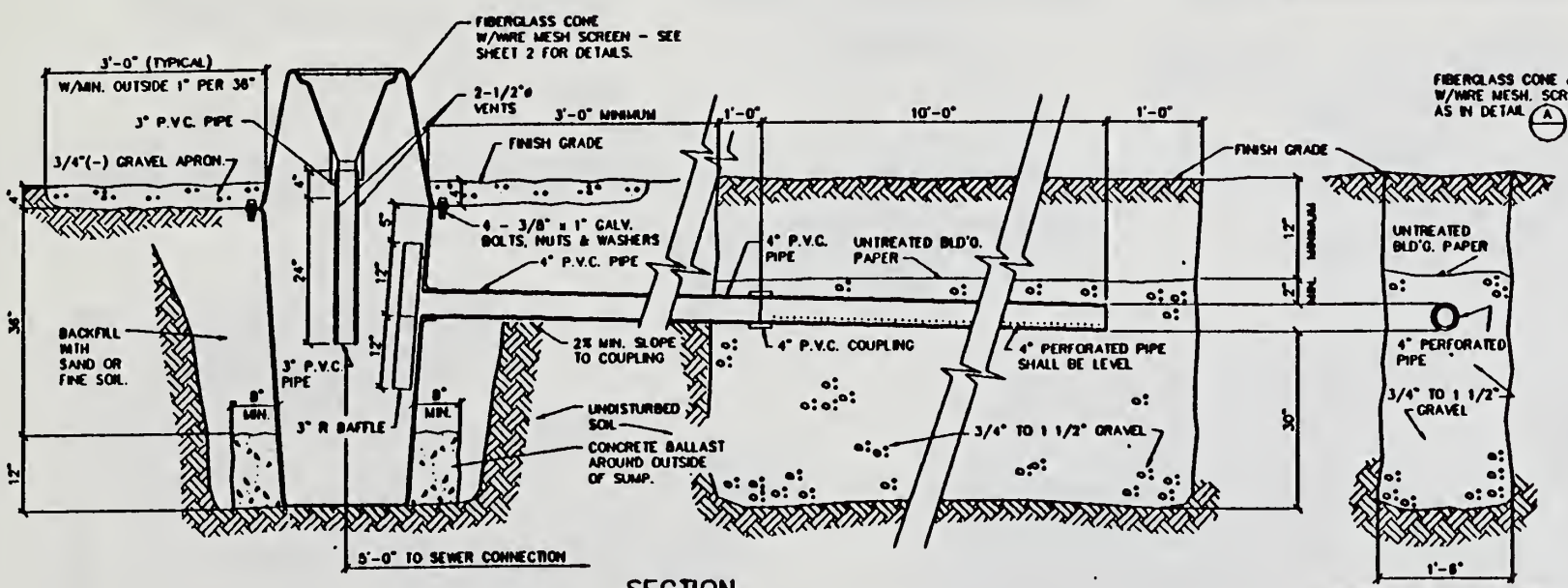
FEB. 27,1987
C0001901

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION SIX
THE PACIFIC NORTHWEST REGION

MOBILE HOME UTILITIES

APPROVED _____ DRAWN _____ DATE
RECOMMENDED _____ DESIGNED _____ DATE
CHECKED _____ DATE
REVIEWED _____ DATE

Sht 1
OF 2



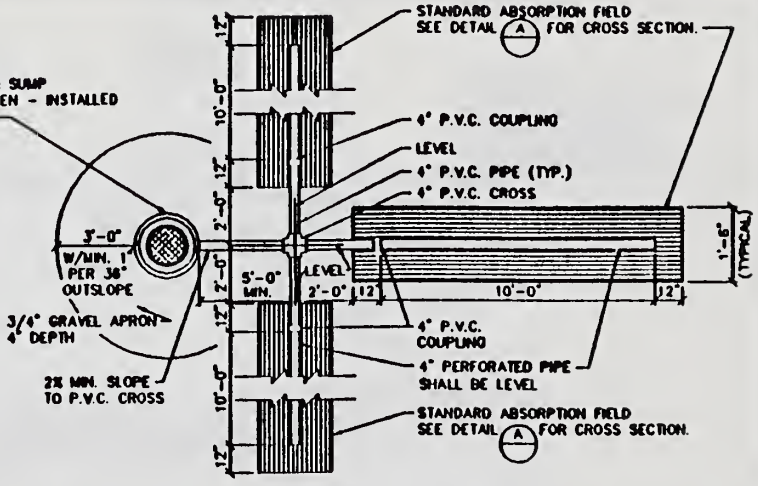
SECTION

INDIVIDUAL UNIT WASTE WATER SUMP & STANDARD ABSORPTION FIELD (A)

NO SCALE OPTION A

CROSS SECTION

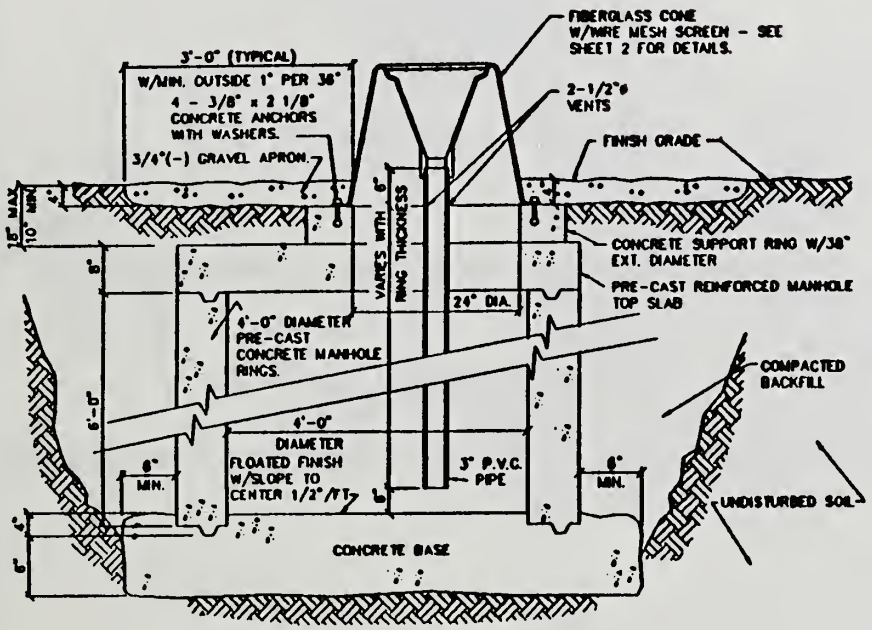
STANDARD ABSORPTION FIELD



PLAN

MULTIPLE UNIT WASTE WATER SUMP & STANDARD ABSORPTION FIELD (B)

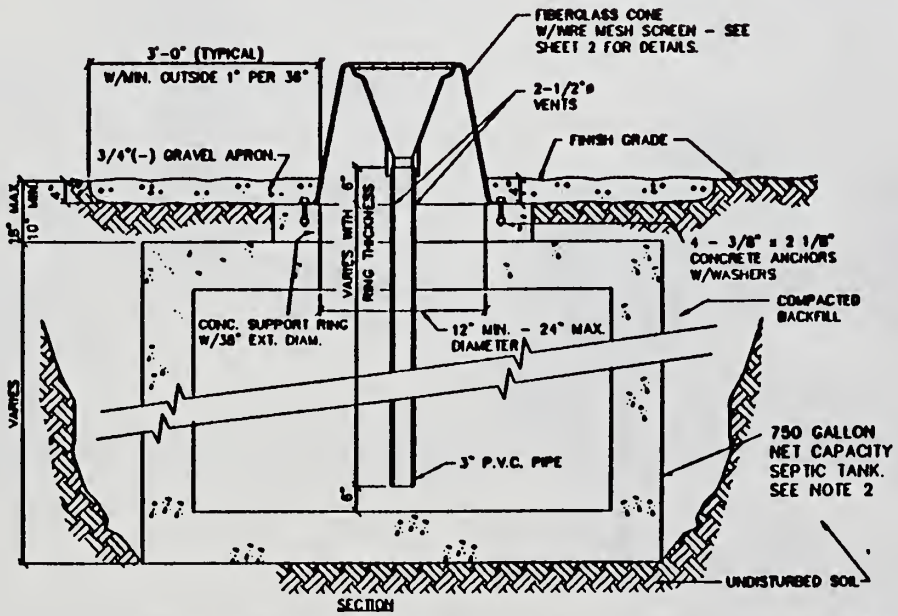
NO SCALE OPTION B



SECTION

WASTE WATER HOLDING TANK (C-1)

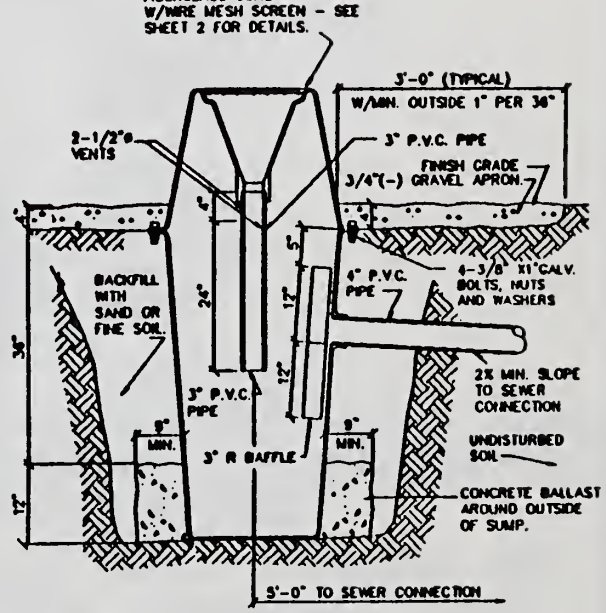
NO SCALE OPTION C-1



SECTION

WASTE WATER HOLDING TANK (C-2)

NO SCALE OPTION C-2



WASTE WATER SUMP WITH CONNECTION TO COLLECTION SYSTEM (D)

NO SCALE OPTION D

NOTES:

1. USE OPTION "A" UNLESS SPECIFIED OTHERWISE IN SPECIFICATIONS.
2. NET CAPACITY DETERI BALLAST OR ANCHORING PROVIDED. SEE SPECIFICATIONS.

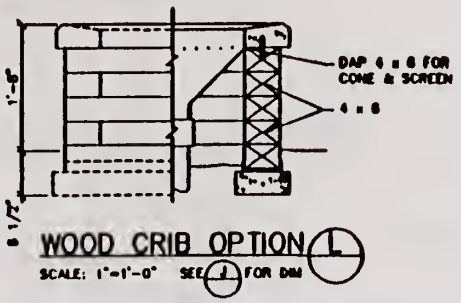
C0002000

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION SIX
PACIFIC NORTHWEST REGION

APPROVED	S/D H.N.	DRAWN	DATE 01/72
RECOMMENDED	S/R M.	DESIGNED	DATE 03/72
		CHECKED AUW	DATE 10/72
		REVIEWED	DATE

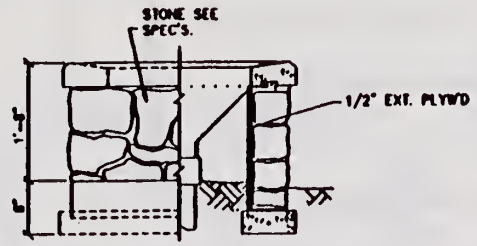
WASTE WATER DISPOSAL UNITS OPTIONS

SHT 1 OF 2



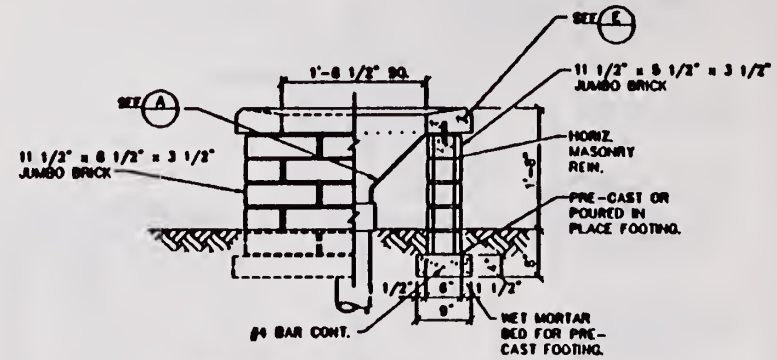
WOOD CRIB OPTION (L)

SCALE: 1"=1'-0" SEE (J) FOR DIM



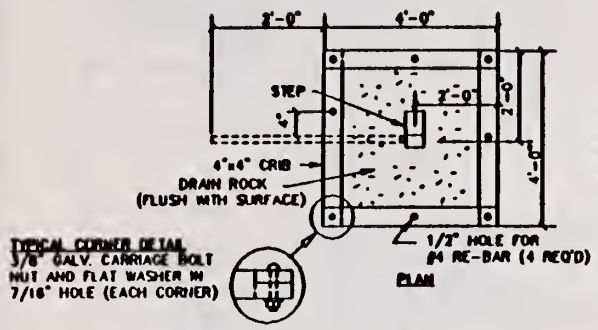
NATURAL STONE OPTION (K)

SCALE: 1"=1'-0" SEE (J) FOR DIM

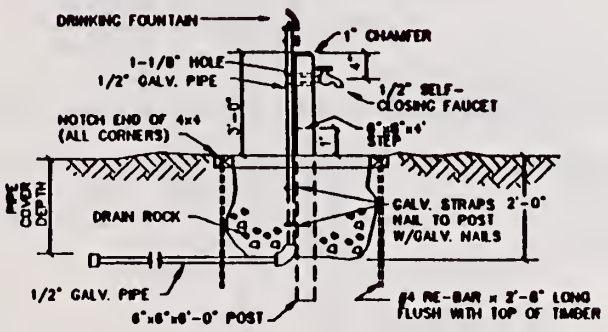


JUMBO BRICK OPTION (J)

SCALE: 1"=1'-0"

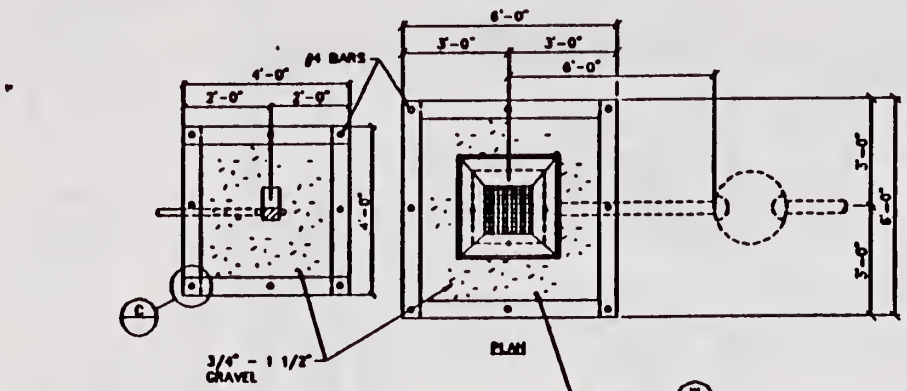


NOTE: HYDRANT AND DRINKING FOUNTAIN OMITTED THIS VIEW FOR CLARITY.



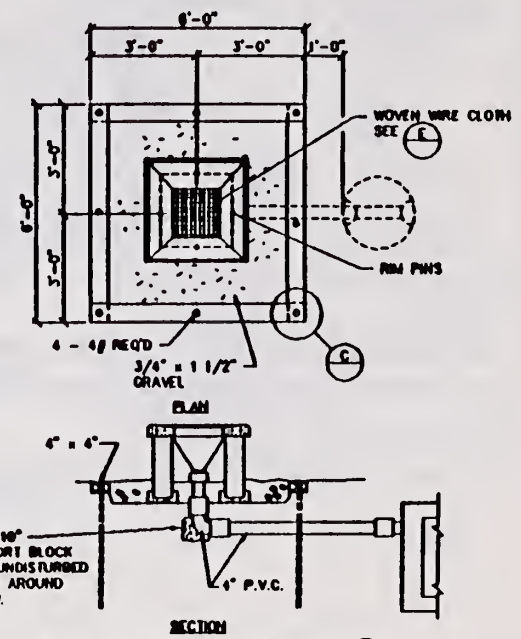
POST HYDRANT-DRINKING FOUNTAIN (HF)

51-33
2/29/88



WASTE WATER SUMP & HYDRANT (WF)

SCALE: 1/2"=1'-0"

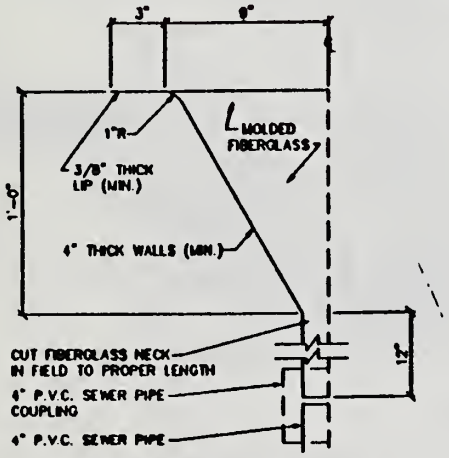


WASTE WATER SUMP (W)

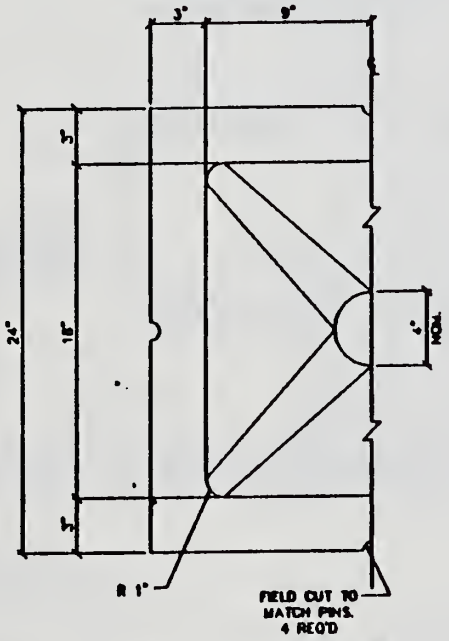
SCALE: 1/2"=1'-0"

C0002100
FEB. 18,1987

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE REGION SIX THE PACIFIC NORTHWEST REGION	CAMPGROUND WASTE WATER SUMP & HYDRANT
APPROVED _____ DATE _____ RECOMMENDED _____ DRAWN _____ DATE _____ DESIGNED _____ DATE _____ CHECKED _____ DATE _____ REVIEWED _____ DATE _____	SHT 1 OF 2

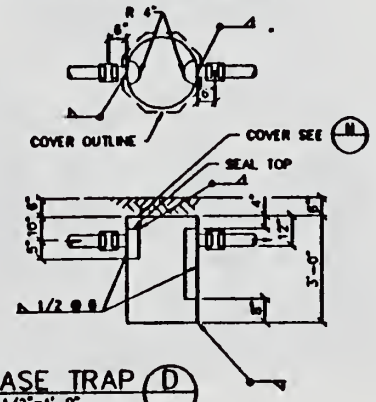


FIBERGLASS CONE (A)
SCALE: 3"=1'-0"



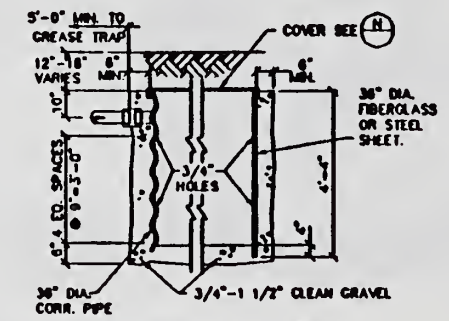
PLAN OF CONE (B)
SCALE: 3"=1'-0"

NOTES:
1. FABRICATE FROM 12 GA. STEEL SHEET OR 1/4" FIBERGLASS.
2. BAFFLES SHALL BE SAME MATERIAL AS WALLS.
3. BAFFLE AT INLET SHALL PROVIDE WATER SEAL.
4. STEEL TRAP SHALL BE GALV AFTER FABRICATION.

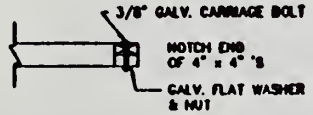


GREASE TRAP (D)
SCALE: 1/2"=1'-0"

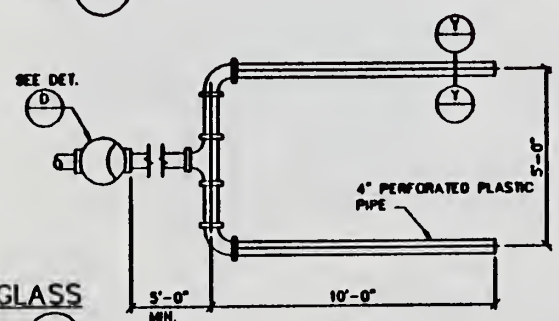
NOTE:
1. FABRICATE FROM 12 GA. STEEL SHEET, 12 GA. CORR. PIPE (STEEL OR ALUM.) OR 1/4" FIBERGLASS.
2. STEEL OPTIONS SHALL BE GALV. AFTER FABRICATION.
3. MIN. PERFORATIONS - 4 ROWS OF 3/4" HOLES, 8 HOLES PER ROW, ALL OPTIONS.

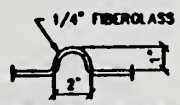


SEEPAGE PIT (F)
SCALE: 1/2"=1'-0"

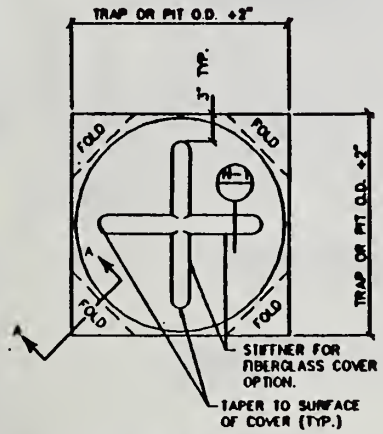


TYP. CORNER DETAIL (C)
SCALE: 1"=1'-0"

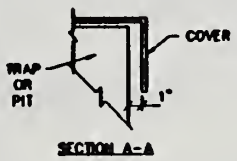




STIFFNER FOR FIBERGLASS COVER OPTION (N-1)
NO SCALE

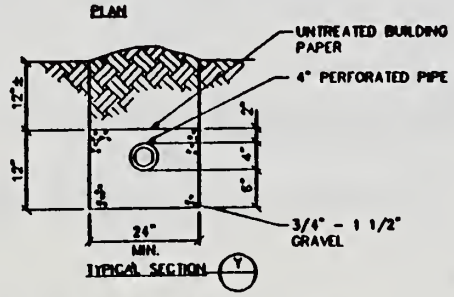


COVER DETAIL (N)
NO SCALE



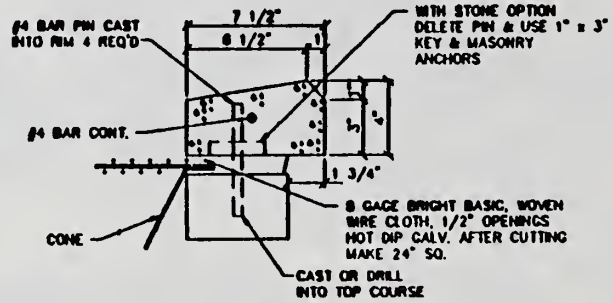
SECTION A-A

NOTES:
1. COVER SHALL BE 12 GA. STEEL OR 1/4" FIBERGLASS WITH CORNERS FOLDED AS SHOWN.
2. STEEL COVER SHALL BE GALV. AFTER FABRICATION.



TYPICAL SECTION (Y)

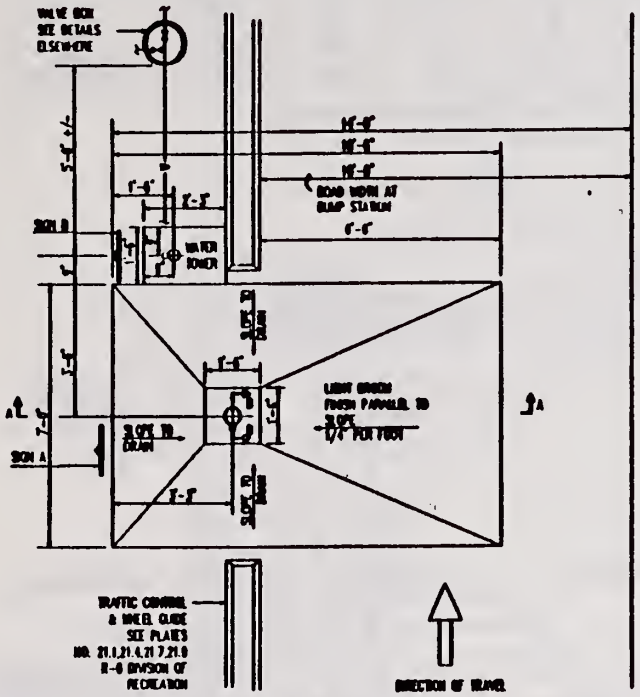
DRAIN-FIELD DETAILS (G)
NO SCALE



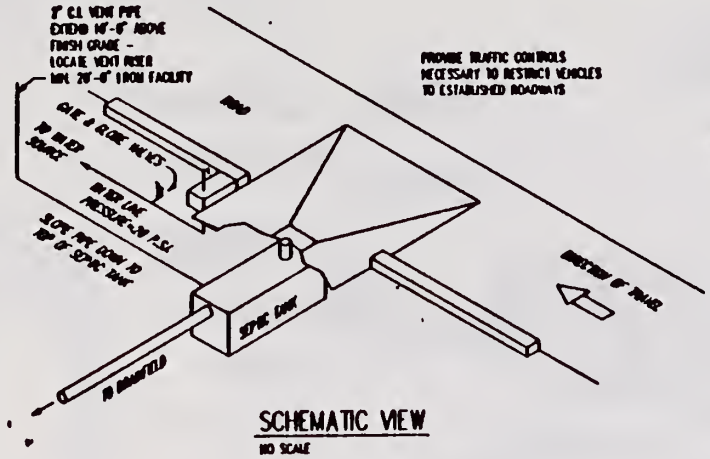
RIM DETAIL (E)
SCALE: 3"=1'-0"

C0002101
FEB. 18,1987

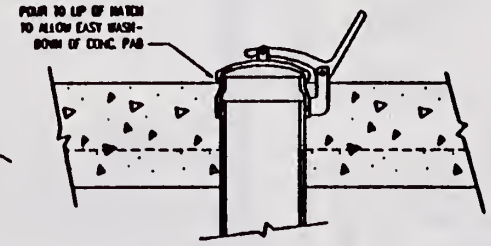
U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE REGION SIX THE PACIFIC NORTHWEST REGION	CAMPGROUND WASTE, WATER SUMP & HYDRANT
APPROVED _____ DATE RECOMMENDED _____ DRAWN _____ DATE DESIGNED _____ DATE CHECKED _____ DATE REVIEWED _____ DATE	S SHT 2 OF 2



PLAN VIEW
SCALE: 1/2"=1'-0"



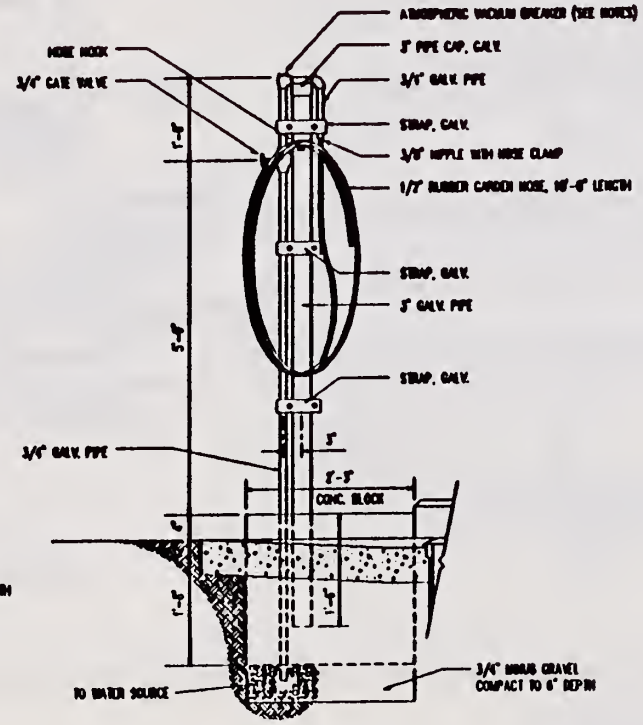
SCHEMATIC VIEW
NO SCALE



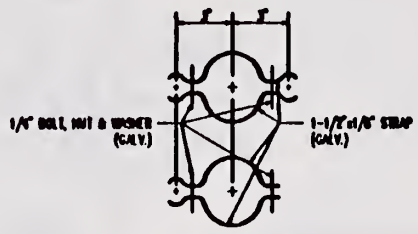
SECTION B-B
DRAIN HATCH - DETAIL
NO SCALE

MAJOR COMPONENTS

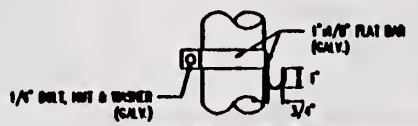
ITEM	NO.	REMARKS
CONCRETE PAD & TOWER BLOCK	1	APPROX. 1-1/2 CU. YDS, INCLUDE 6x6x10/10 WIRE MESH, APPROX. 10'-0"x6'-0"
TRAFFIC CONTROL	1	AS NEEDED TO RESTRICT VEHICLES TO ESTABLISHED ROADWAYS
SEPTIC TANK	1	SIZE DEPENDENT ON LOCAL CONDITIONS. DESIGN TO MEET STATE REQUIREMENTS
DRAIN FIELD	1	SIZE DEPENDENT ON LOCAL CONDITIONS. DESIGN TO MEET STANDARDS SET FORTH IN PUBLIC HEALTH MANUAL 526
WATER LINE	1	SUFFICIENT TO MAINTAIN WATER PRESSURE OF 30 P.S.I. AT WATER TOWER. INCLUDE ALL NECESSARY FITTINGS - GALVANIZED
WATER TOWER	1	8' OF 3" GALV. PIPE WITH CAP. 15' OF 3/4" GALV. PIPE
POST OPERATED HATCH	1	EQUAL TO "VAPEC" MODEL 4838 4" DIA. WITH STD. PIPE THREAD VAPOR RECOVERY SYSTEMS CO. 2620 ALAMEDA STREET COMPTON, CALIFORNIA
ATMOSPHERIC VACUUM BREAKER	1	EQUAL TO: "ELOAM" NO. 300 TYLER NO. 790A "WATTS" NO. 008 (SURFACE MECHANICAL RESEARCH) SMR NO. 400
VALVES	3	2 - 3/4" GATE VALVES 1 - 1/2" GLOBE VALVE
		12"x24" CONCRETE IRRIGATION PIPE (ASTM C-118) WITH COVER



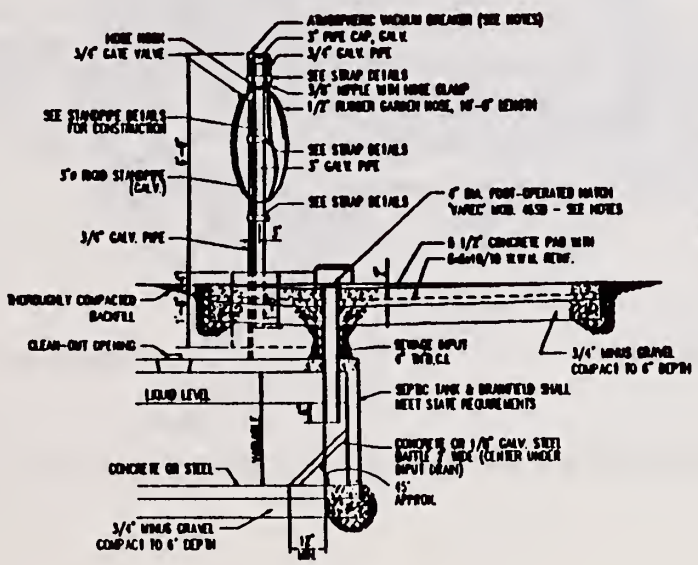
STAND PIPE DETAILS
SCALE: 1"=1'-0"



STRAP DETAILS
NO SCALE



HOSE HOOK DETAIL
NO SCALE



SECTION A-A
1/2"=1'-0"

HOLDING TANK DISPOSAL INSTRUCTIONS

CONNECT YOUR HOSE TO HOLDING TANK - PLACE END SECURELY IN DRAIN OPENING WHILE HOLDING COVER OPEN WITH FOOT - OPEN TRAILER TANK VALVE - FLUSH TANK WITH WATER HOSE - FLUSH AWAY ANY SPILLAGE INTO DRAIN

UNSAFE WATER

USE THIS HOSE FOR FLUSHING TRAILER HOLDING TANK ONLY

POTABLE WATER AVAILABLE AT _____

SIGN 'A'

SIGN 'B'

CD082200
DEC 4, 1980

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION SIX
THE PACIFIC NORTHWEST REGION

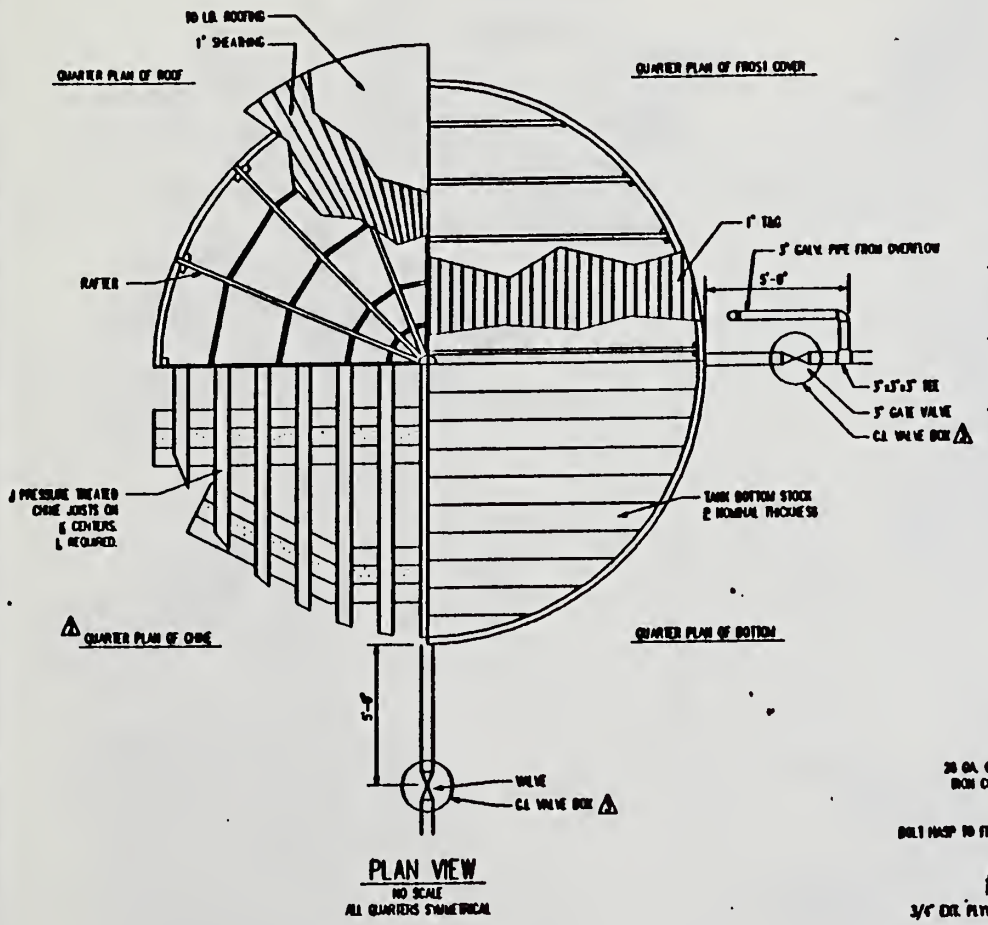
APPROVED _____
RECOMMENDED _____

DRAWN _____ DATE _____
DESIGNED _____ DATE _____
CHECKED _____ DATE _____
REVIEWED _____ DATE _____

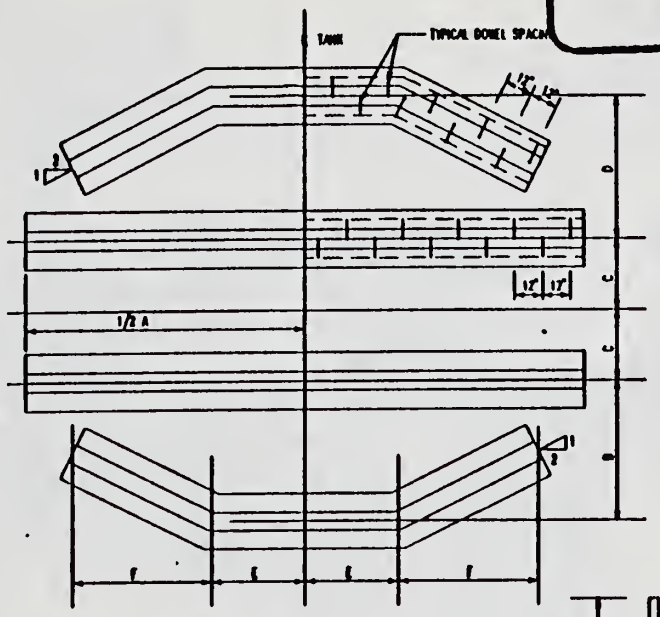
RECREATION VEHICLE SEWAGE DUMP STATION

SHT. 1
OF 1

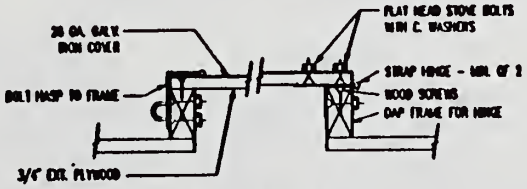
THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN UPDATED, OR EDITED FOR CADD CONVERSION ERRORS



PLAN VIEW
NO SCALE
ALL QUARTERS SYMMETRICAL

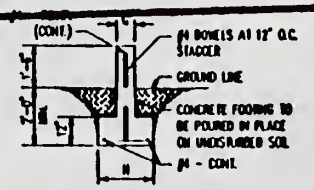


FOUNDATION PLAN
NO SCALE

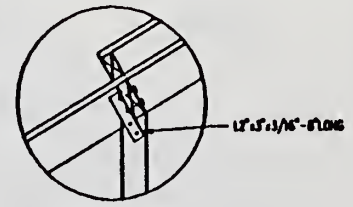


HARDWARE SHALL BE GALV.
USE FLAT HEAD STOVE BOLTS

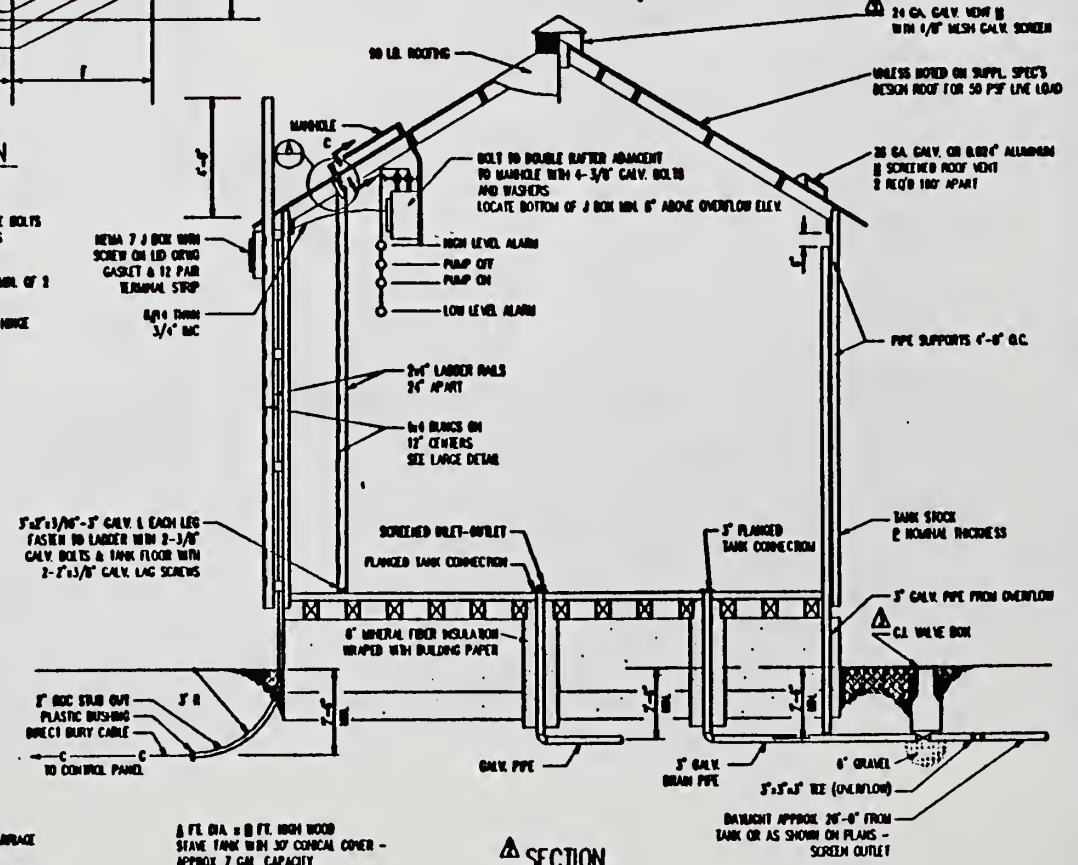
SECTION C-C
NO SCALE



FOOTING DETAIL
NO SCALE

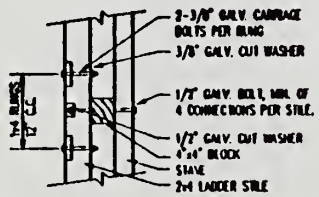


INSIDE LADDER DETAIL (A)
NO SCALE



A FT. DIA x B FT. HIGH WOOD STAVE TANK WITH 30° CONICAL COVER - APPROX. Z GAL. CAPACITY

SECTION
NO SCALE



LADDER DETAIL
NO SCALE

CHART FOR FOUNDATION PLAN #1

TANK SIZE (GAL'S) / DIMENSION	60,000	30,000	25,000	20,000	15,000	10,000	5,000
A	33'	30'	28'	18'	15'-0"	15'	10'
B	15'	14'	14'	12'	12'	10'	10'
C	X-10 1/2"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
D	5'-0"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
E	3'-10"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
F	1'-6"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
G	10"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
H							
SOIL BEARING 1.0 T/FT2	2'-0"	[illegible]	[illegible]	2'-0"	2'-0"	1'-6"	1'-6"
SOIL BEARING 2.0 T/FT2	1'-6"	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SOIL BEARING 3.0 T/FT2	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"
J	6x8	6x8	6x8	6x8	6x8	5x8	6x8
K	10"	10"	10"	10"	10 1/2"	10"	8"
L	14	13	13	13	11	10	8
M	15"	15"	15"	15"	15"	15"	12"
N	8"	8"	8"	8"	8"	8"	8"
P	8"	8"	8"	8"	8"	8"	8"

NOTES:
1. SUBMIT SHOP DRAWING FOR APPROVAL PRIOR TO FABRICATION.
2. SEE SPEC'S FOR TANK SIZE (Z) AND SOIL BEARING VALUE (T/FT2)

	REV. APR-77	RM
	REV. AUG-84	RLH
	REV. MAR-86	TSB
	REV. DEC-64	DWM
	REV. SEP-64	PLH

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION SIX
THE PACIFIC NORTHWEST REGION

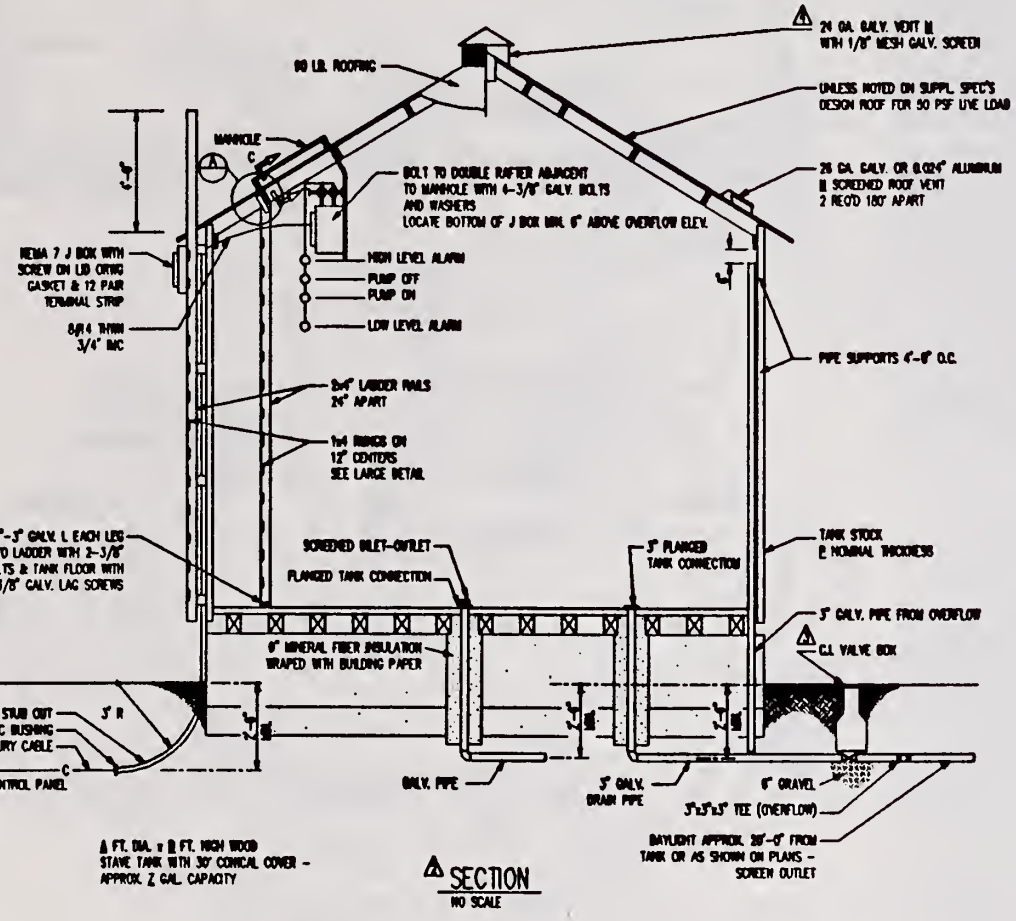
C0002300
08-30-88

APPROVED / RECOMMENDED: S/B.B.P.

DRAWN — DATE
DESIGNED — DATE
CHECKED — DATE
REVISED — DATE

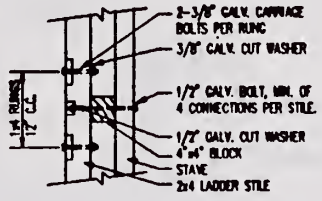
WOOD STAVE [illegible]S [illegible]ANK

SHT. 1
OF 1

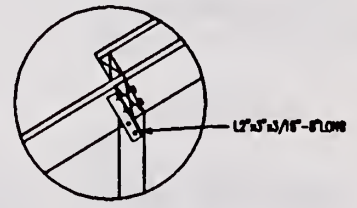


8 FT. DIA. x 8 FT. HIGH WOOD STAVE TANK WITH 30° CONICAL COVER - APPROX. 2 GAL. CAPACITY

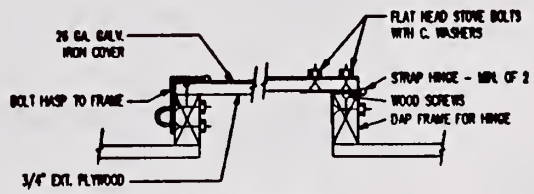
⚠ SECTION
NO SCALE



LADDER DETAIL
NO SCALE



INSIDE LADDER DETAIL (A)
NO SCALE



HARDWARE SHALL BE GALV. USE FLAT HEAD STOVE BOLTS

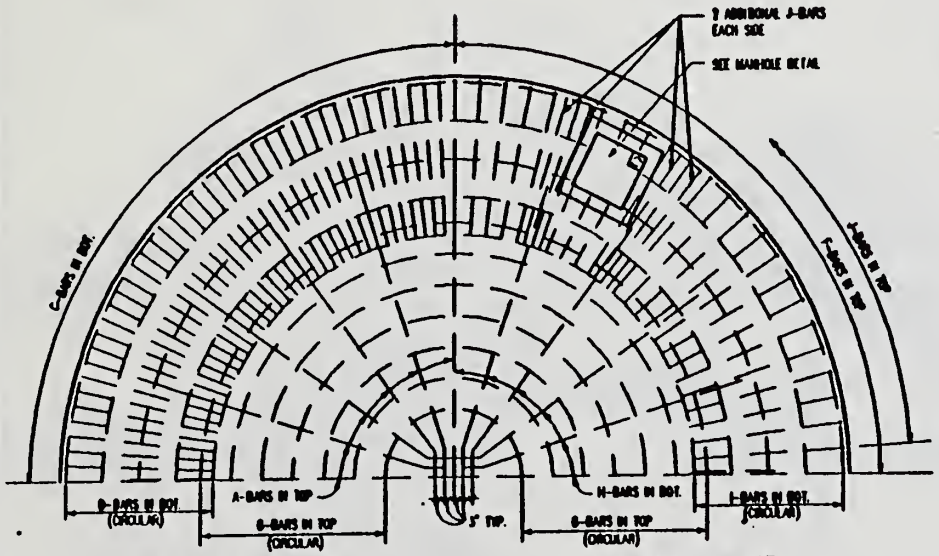
⚠ SECTION C-C
NO SCALE

⚠	REV. APR-77	DM
⚠	REV. AUG-68	DCB
⚠	REV. MAR-66	TSB
⚠	REV. DEC-64	DHH
⚠	REV. SEP-64	PEH

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

DRAWN	DATE	SHT.
DESIGNED	DATE	
CHECKED	DATE	OF
REVIEWED	DATE	



QUARTER PLAN OF BOTTOM SLAB

NO SCALE

QUARTER PLAN OF TOP SLAB

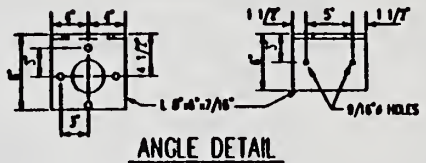
NO SCALE

TANK SIZES

TANK NO.	D INSIDE DIAMETER	H INSIDE HEIGHT	T_1 SLAB	T_2 WALL	NOMINAL CAPACITY GALLONS
1	20'-0"	14'-0"	10"	8"	30,000
2	18'-8"	13'-6"	10"	8"	25,000
3	17'-0"	12'-6"	9 1/2"	7 1/2"	20,000
4	15'-8"	11'-8"	9"	7"	15,000
5	13'-8"	10'-8"	8 1/2"	6 1/2"	10,000

GENERAL NOTES

SPECIFICATIONS: SEE DIVISION 3303 OF STANDARD SPECIFICATIONS.
TANK SIZE: SEE SUPLEMENTAL SPECIFICATIONS.
PIPING LAYOUT: SEE MECHANICAL SHEET
DESIGN 100 PSF LIVE LOAD AND 2 FT. OF EARTH BECKING
100 PCF FOR ROOF SLAB.
ALL BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED.
REINFORCING STEEL FOR MANHOLE NOT LISTED IN STEEL SCHEDULE.



ANGLE DETAIL

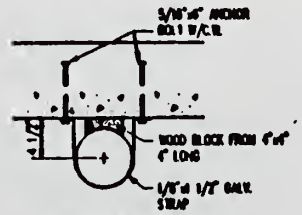
NO SCALE

CIRCULAR BARS IN SLABS + VAR. LENGTH

TANK NO.	B-BARS NO.	B-BARS SIZE	B-BARS SPACING	D-BARS NO.	D-BARS SIZE	D-BARS SPACING	G-BARS NO.	G-BARS SIZE	G-BARS SPACING	I-BARS NO.	I-BARS SIZE	I-BARS SPACING
1	8	#8	10"	5	#3	12"	8	#5	10"	5	#3	12"
2	8	#8	10"	5	#3	12"	8	#5	10"	5	#3	12"
3	8	#5	8"	4	#3	12"	8	#4	8"	4	#3	12"
4	8	#5	8"	4	#3	12"	8	#4	8"	4	#3	12"
5	7	#5	8"	4	#3	12"	7	#4	8"	4	#3	12"

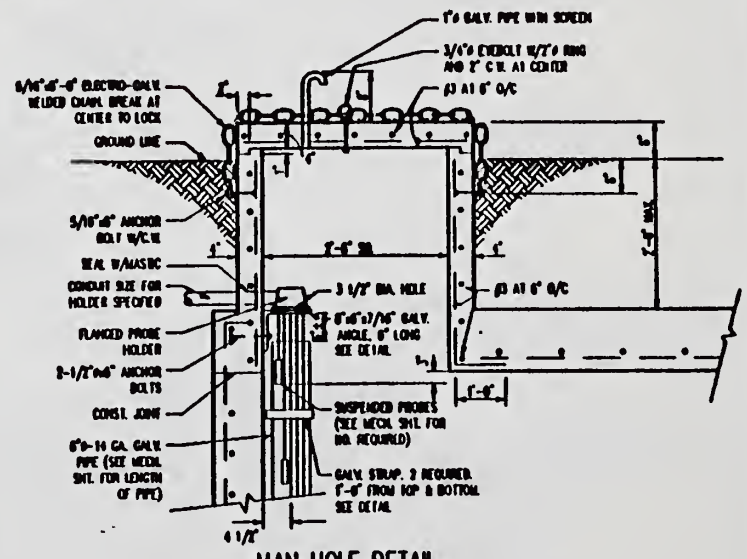
BARS AT CENTER OF SLAB

TANK NO.	A-BARS NO.	A-BARS SIZE	A-BARS LENGTH	H-BARS NO.	H-BARS SIZE	H-BARS LENGTH
1	10	#8	15'-0"	10	#5	15'-0"
2	10	#8	14'-0"	10	#5	14'-0"
3	8	#8	13'-0"	8	#5	13'-0"
4	10	#5	12'-0"	8	#5	12'-0"
5	10	#4	10'-8"	10	#4	10'-8"



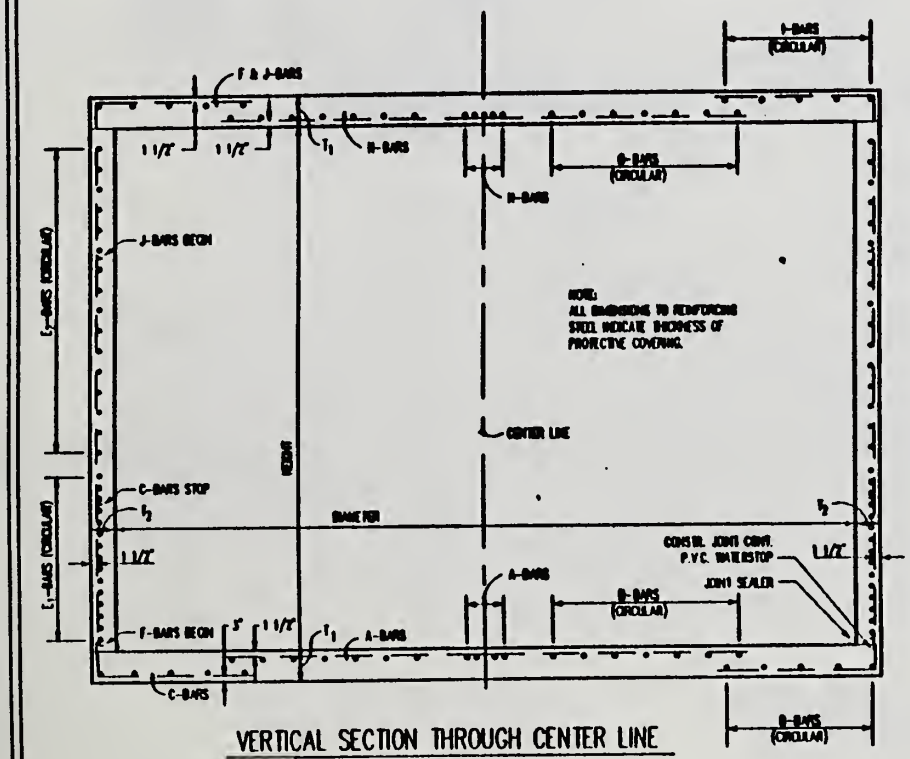
STRAP DETAIL

NO SCALE



MAN HOLE DETAIL

NO SCALE

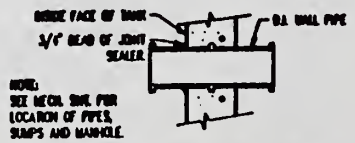


VERTICAL SECTION THROUGH CENTER LINE

NO SCALE

BENT BARS TYPE L

TANK NO.	C-BARS NO.	C-BARS SIZE	C-BARS SPACING	C-BARS HORIZ.	C-BARS VERT.	F-BARS NO.	F-BARS SIZE	F-BARS SPACING	F-BARS HORIZ.	F-BARS VERT.	J-BARS NO.	J-BARS SIZE	J-BARS SPACING	J-BARS HORIZ.	J-BARS VERT.
1	144	#5	5 1/2"	4'-3"	4'-3"	53	#5	15"	4'-3"	14'-4"	57	#5	15"	4'-3"	4'-3"
2	134	#5	5 1/2"	4'-0"	4'-0"	48	#5	18"	4'-0"	13'-0"	50	#5	18"	4'-0"	4'-0"
3	113	#5	8"	3'-8"	3'-8"	57	#4	12"	3'-8"	12'-8"	61	#4	12"	3'-8"	3'-8"
4	95	#5	8 1/2"	3'-8"	3'-8"	44	#4	14"	3'-8"	11'-8"	48	#4	14"	3'-8"	3'-8"
5	98	#4	5 1/2"	3'-3"	3'-3"	34	#4	18"	3'-3"	10'-8"	38	#4	18"	3'-3"	3'-3"

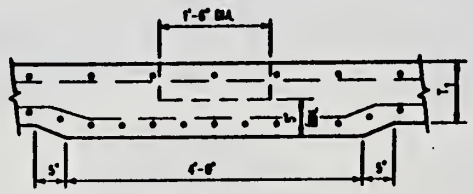


TYPICAL PIPE CONNECTION

NO SCALE

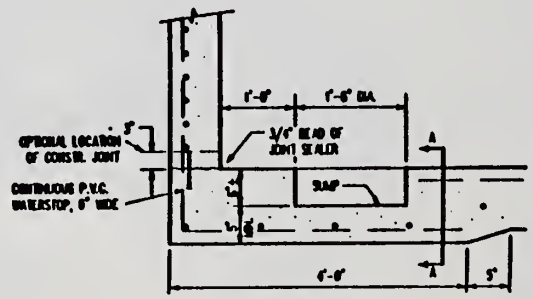
CIRCULAR BARS IN WALL (INCL. 2.250 LAPS)

TANK NO.	E_1-BARS NO.	E_1-BARS SIZE	E_1-BARS SPACING	E_1-BARS LENGTH	E_2-BARS NO.	E_2-BARS SIZE	E_2-BARS SPACING	E_2-BARS LENGTH
1	15	#5	3 3/4"	68'-8"	17	#5	8 1/2"	68'-8"
2	14	#5	3 3/4"	63'-8"	15	#5	7"	63'-8"
3	11	#5	4"	58'-8"	11	#5	8"	58'-8"
4	9	#5	5"	54'-0"	8	#5	8 1/2"	54'-0"
5	10	#4	4"	47'-0"	10	#4	7"	47'-0"



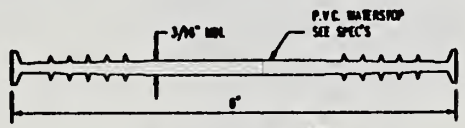
SECTION A-A

NO SCALE



SUMP DETAIL

NO SCALE



WATERSTOP D

NO SCALE

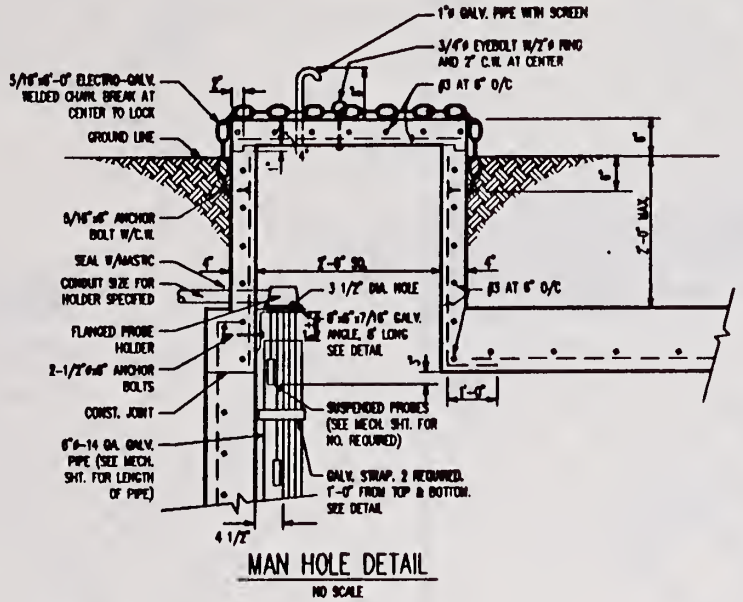
C0002400
08/25/88

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION SIX
THE PACIFIC NORTHWEST REGION

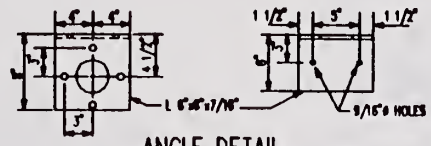
REINFORCED CONCRETE TANK

APPROVED RECOMMENDED	S/B B.P.	DRAWN	L.C.P. DATE 8/88
		DESIGNED	D.F.H. DATE 7-27-88
		CHECKED	D.H.H. DATE
		REVIEWED	DATE

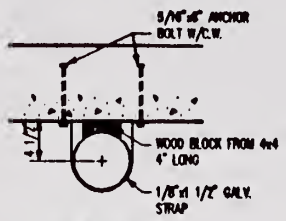
SHT 1 OF 1



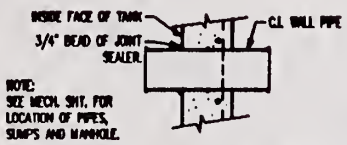
MAN HOLE DETAIL
NO SCALE



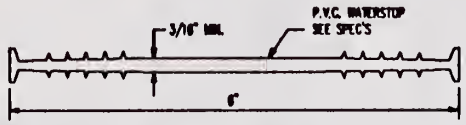
ANGLE DETAIL
NO SCALE



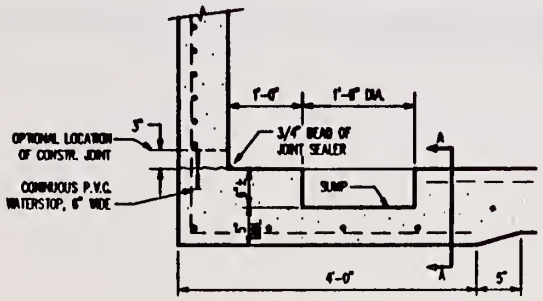
STRAP DETAIL
NO SCALE



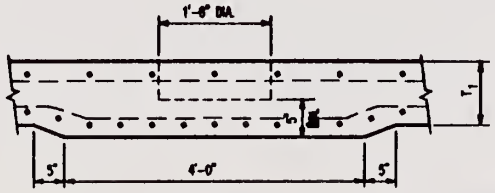
TYPICAL PIPE CONNECTION
NO SCALE



WATERSTOP DETAIL
NO SCALE



SUMP DETAIL
NO SCALE



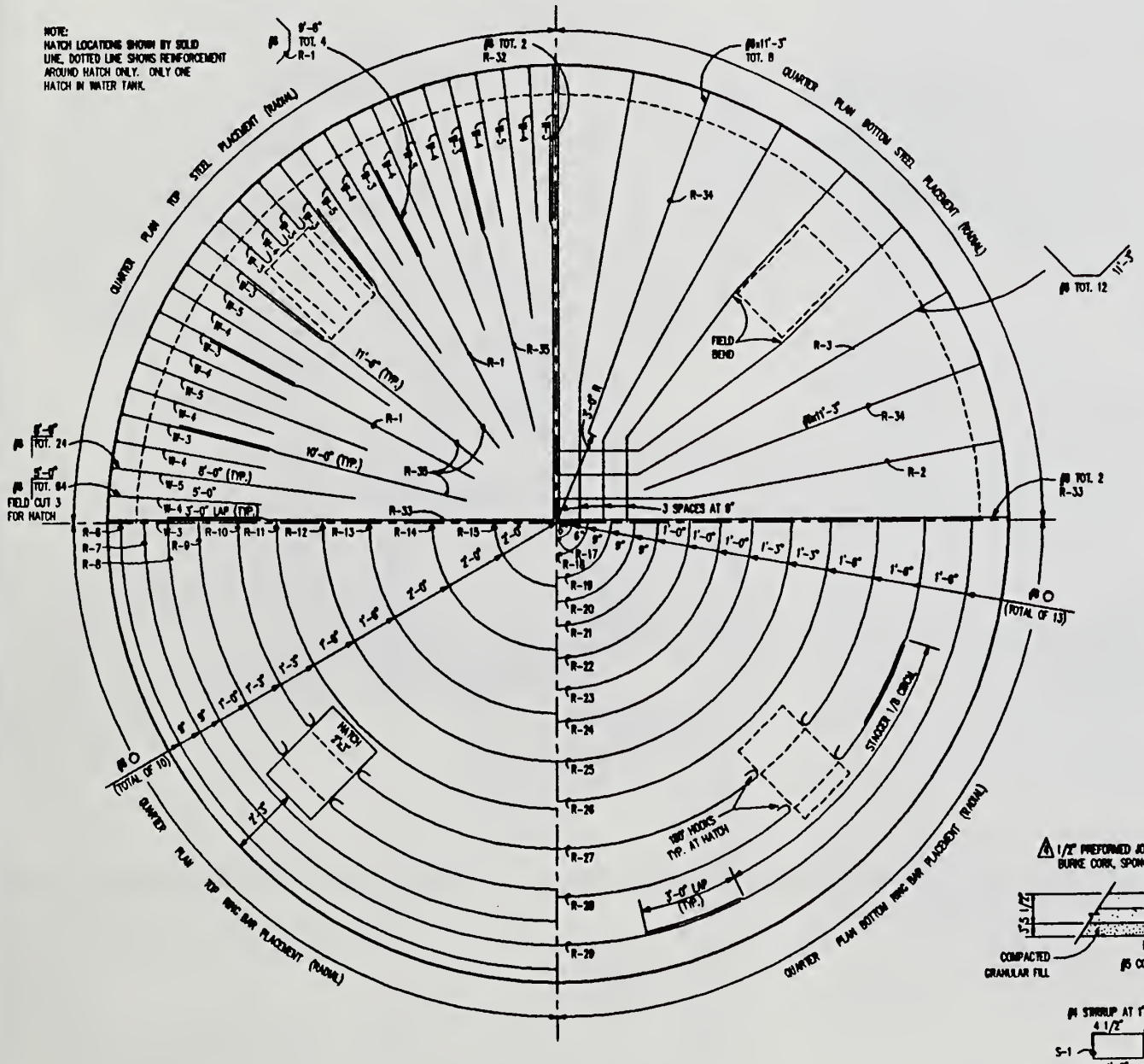
SECTION A-A
NO SCALE

GENERAL NOTES

SPECIFICATIONS: SEE DIVISION 4400 OF STANDARD SPECIFICATIONS.
TANK SIZE: SEE SUPPLEMENTAL SPECIFICATIONS.
PIPING LAYOUT: SEE MECHANICAL SHEET
DESIGN: 100 PSF LIVE LOAD AND 2 FT. OF EARTH WEIGHING 100 PCF FOR ROOF SLAB.
ALL BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED.
REINFORCING STEEL FOR MANHOLE NOT LISTED IN STEEL SCHEDULE.

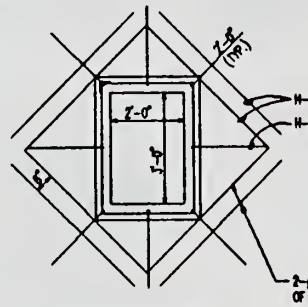
C0002401
12/29/86

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE THE PACIFIC NORTHWEST REGION	REINFORCED CONCRETE TANK AND DETAILS 10,000 TO 30,000 GALLONS
DRAWN ____ DATE ____ DESIGNED ____ DATE ____ CHECKED ____ DATE ____ REVIEWED ____ DATE ____	SHT. 2 OF 2



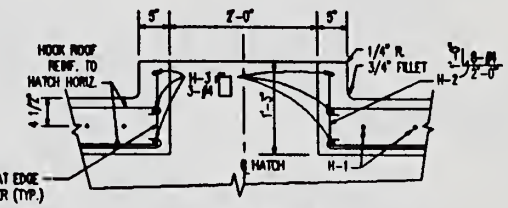
ROOF REINFORCING STEEL PLAN

SCALE: 1/2"=1'-0"



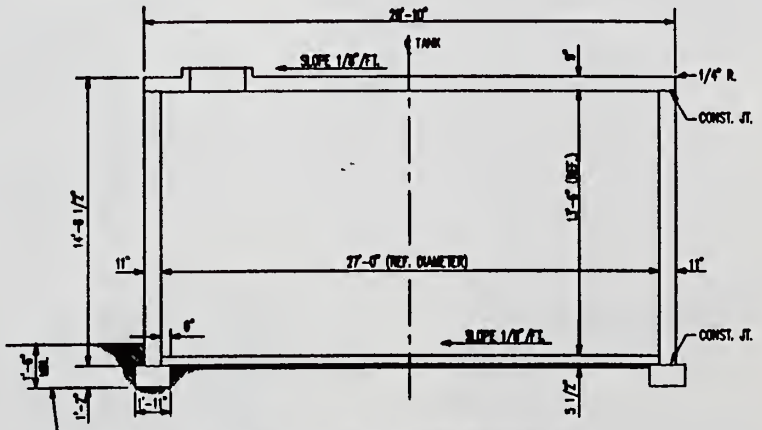
HATCH SECTION

SCALE: 1/2"=1'-0"



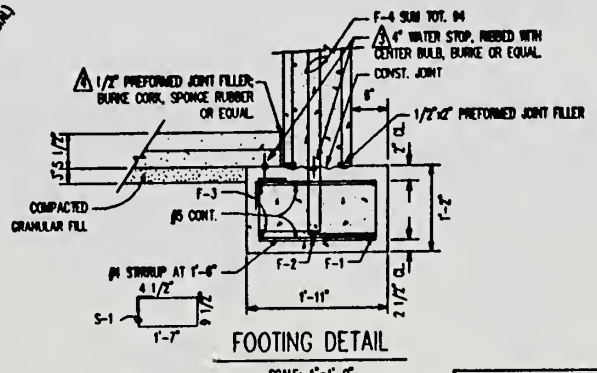
HATCH SECTION

SCALE: 1"=1'-0"



TANK SECTION AND DIMENSIONS

SCALE: 1/4"=1'-0"



FOOTING DETAIL

SCALE: 1"=1'-0"

GENERAL NOTES

SPECIFICATION
- DESIGN – UNIFORM BUILDING CODE, 1976 ED.
- CONSTRUCTION – FOREST SERVICE CSI CONSTRUCTION SPECIFICATIONS AND SPECIAL PROJECT SPECIFICATIONS

LIVE LOAD
- 150 PSF. ROOF, 50 PSF. WALL

UNIT STRESSES AND MATERIALS
- CONCRETE – Fc'=3000PSI, Fc=1200 PSI, Ft=300 PSI
- REINFORCING STEEL – ASTM A615 GRADE 40, Fy=40,000 PSI, Ft=20,000 PSI Ft=14,000(WALL) PSI
- FOUNDATION BEARING – DRAINED DENSE INORGANIC MATERIALS EXCLUSIVE OF CLAY. P=1500 PSI

12/29/88
C0002500

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

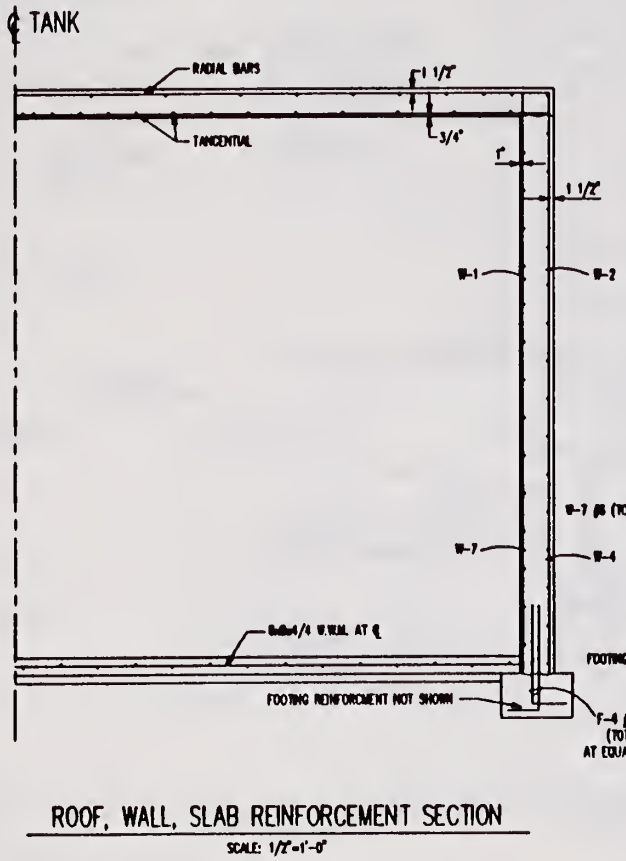
DRAWN ____ DATE ____
DESIGNED ____ DATE ____
CHECKED ____ DATE ____
REVIEWED ____ DATE ____

STANDARD WATER TANK

50,000 GALLON CAPACITY
DIMENSIONS AND REINFORCEMENT

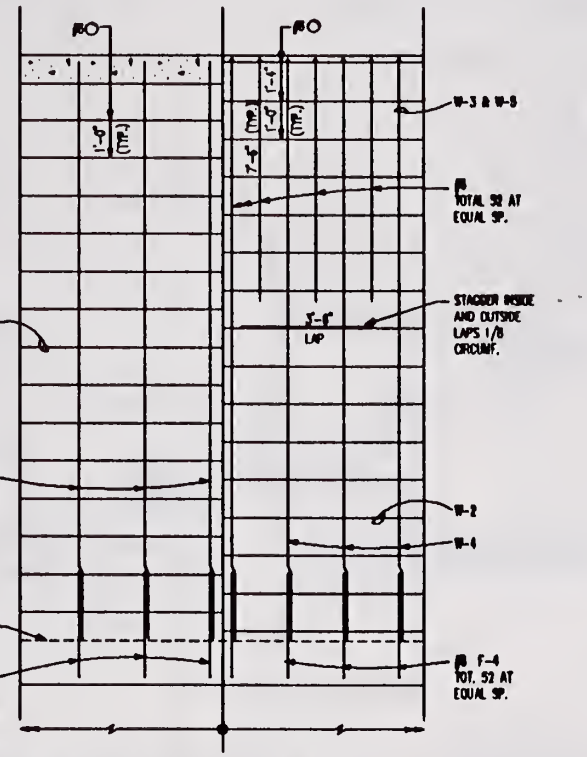
S

SHT.
OF



ROOF, WALL, SLAB REINFORCEMENT SECTION

SCALE: 1/2"=1'-0"



INSIDE FACE OUTSIDE FACE

SCALE: 1/2"=1'-0"

C0002501
12/29/88

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

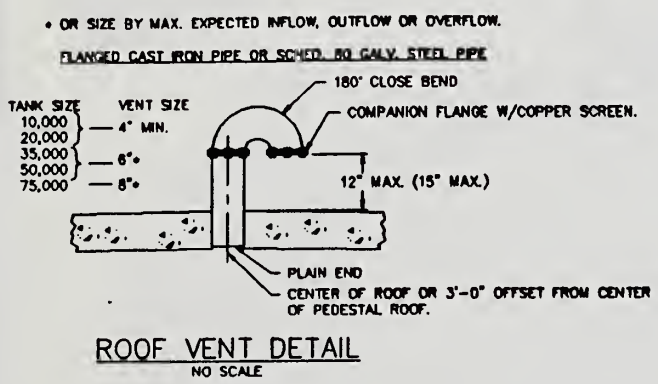
THE PACIFIC NORTHWEST REGION

DRAWN ____ DATE ____
DESIGNED ____ DATE ____
CHECKED ____ DATE ____
REVIEWED ____ DATE ____

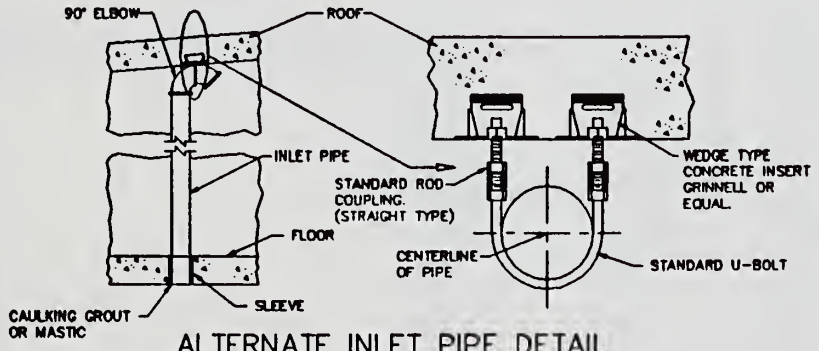
STANDARD WATER TANK

50,000 GALLON CAPACITY
DIMENSIONS AND REINFORCEMENT

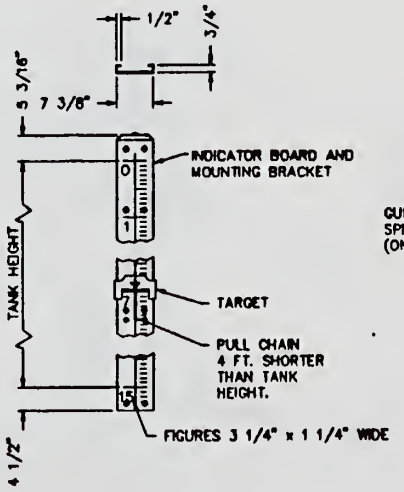
SHT.
OF

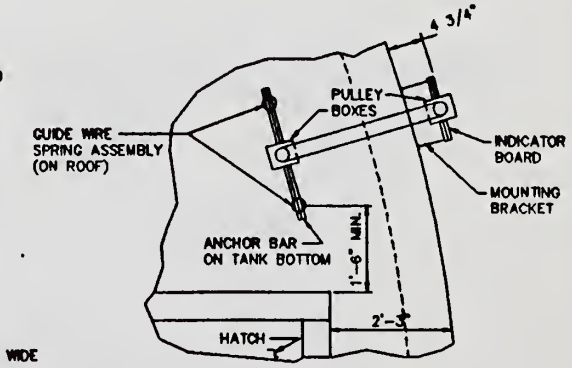


ROOF VENT DETAIL
NO SCALE



ALTERNATE INLET PIPE DETAIL
NO SCALE

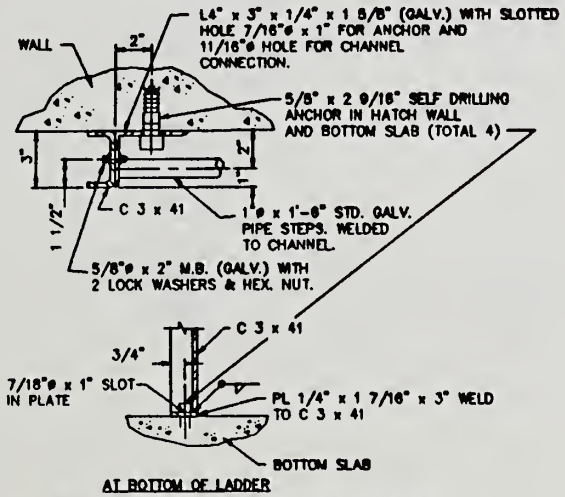




NOTE:
THE LIQUID LEVEL IS READ ON AN INDICATOR BOARD MOUNTED ON OUTSIDE OF THE TANK. THE READ-OUT TARGET IS CONNECTED TO A FLOAT BY A CABLE WHICH PASSES OVER TWO SHEAVES PROVIDING FREE MOVEMENT. THE FLOAT IS KEPT IN ALIGNMENT BY TWO GUIDE WIRES ANCHORED TO TOP & BOTTOM OF TANK.

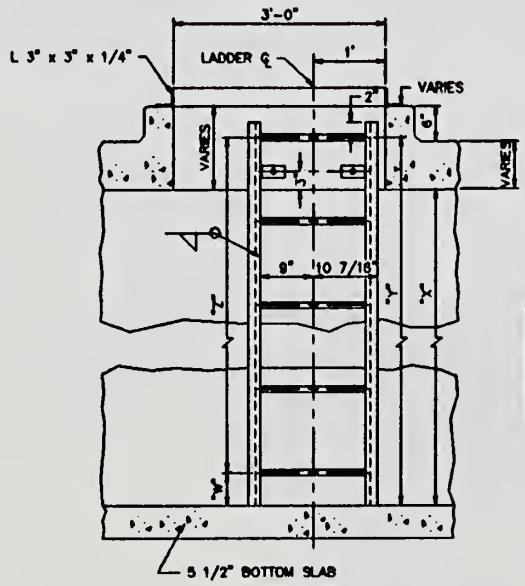
GAGE SUPPLIER: VAREC NO. 6700, DIV. EMERSON ELECT. CO. OR EQUAL.

FLOAT TYPE LIQUID LEVEL GAGE DETAILS
NO SCALE



AT BOTTOM OF LADDER

LADDER CONNECTION DETAIL
SCALE: 3"=1'-0"



LADDER DETAIL
SCALE: 1"=1'-0"

TANK SIZE	"X"	"Y"	"Z"	"W"
10,000 GAL.	8'-1 1/2"	8'-10"	8 STEPS AT 1'-2"	8"
20,000 GAL.	10'-0"	10'-10"	9 STEPS AT 1'-2"	1'-0"
35,000 GAL.	12'-0"	12'-10"	11 STEPS AT 1'-2"	1'-2"
50,000 GAL.	13'-6"	14'-4"	12 STEPS AT 1'-2"	1'-6"
75,000 GAL.	15'-3"	16'-1"	14 STEPS AT 1'-2"	11"

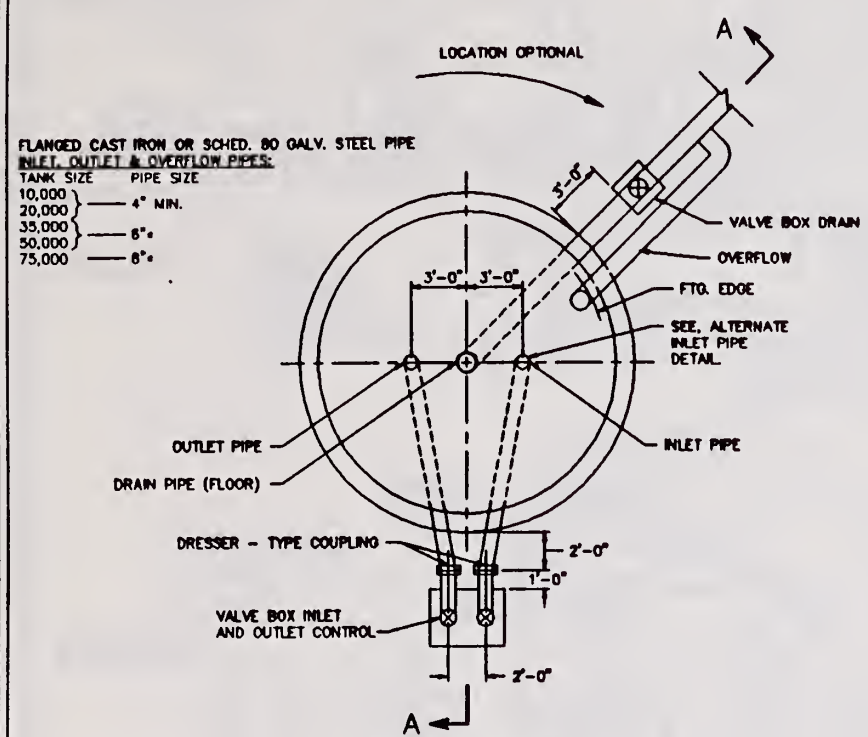
C0002600
FEB. 12,1987

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

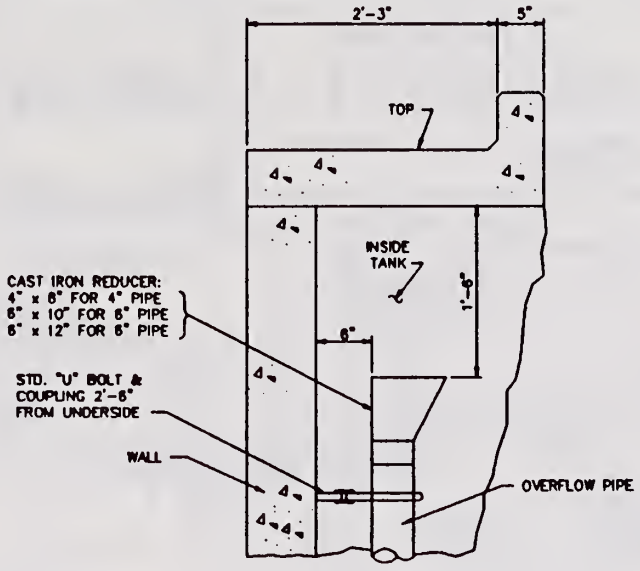
DRAWN ____ DATE ____
DESIGNED ____ DATE ____
CHECKED ____ DATE ____
REVIEWED ____ DATE ____

STANDARD WATER TANK DETAILS

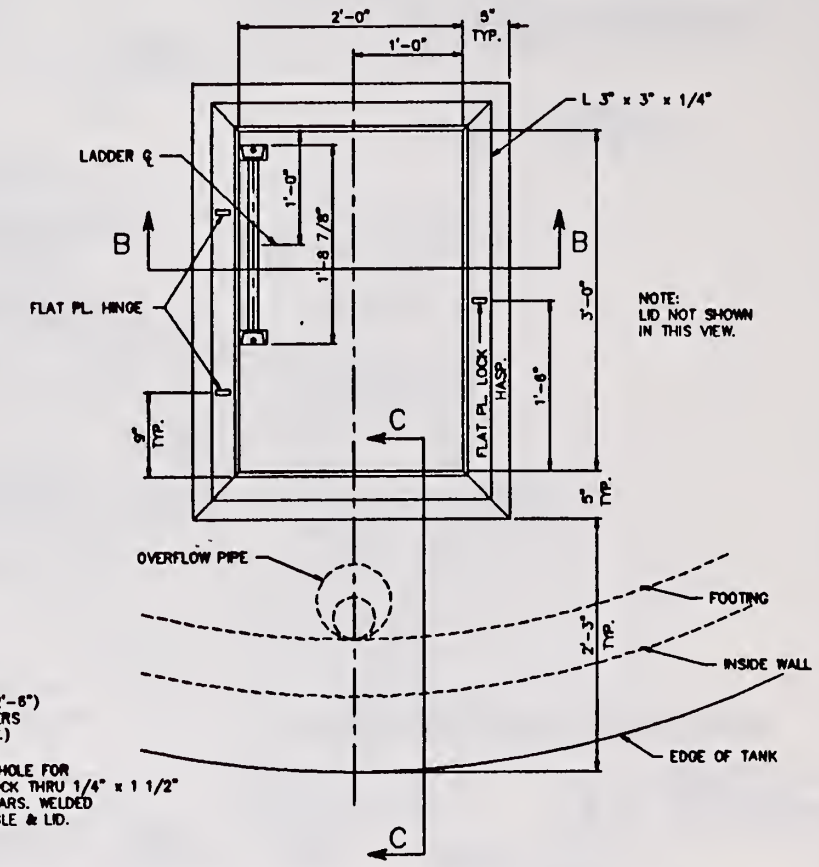
SHT. OF



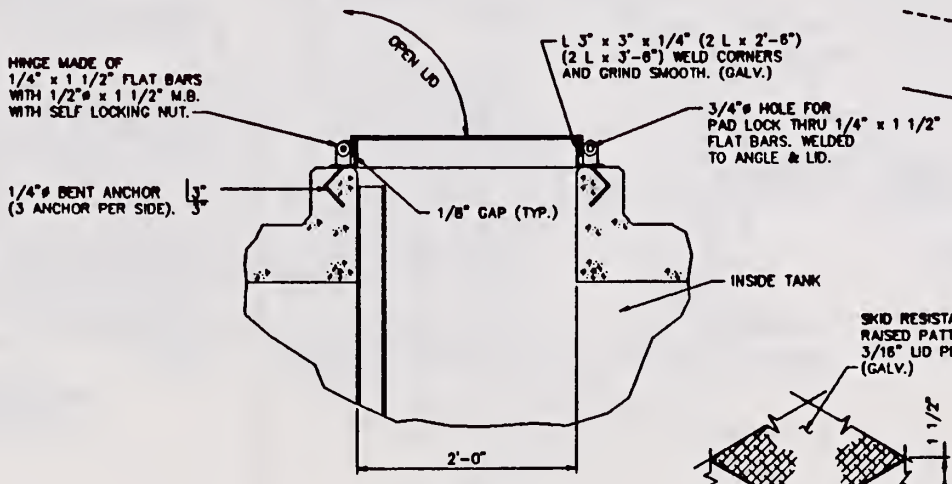
FLOOR PLAN
NO SCALE



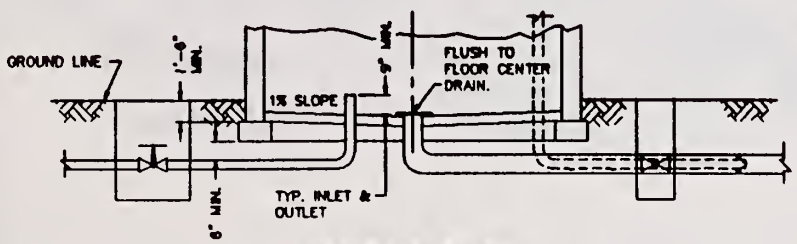
SECTION C-C
SCALE: 1 1/2"=1'-0"



HATCH PLAN
SCALE: 1 1/2"=1'-0"



SECTION B-B
SCALE: 1 1/2"=1'-0"



SECTION A-A
NO SCALE

LID DETAIL
NO SCALE

C0002601
FEB. 13,1987

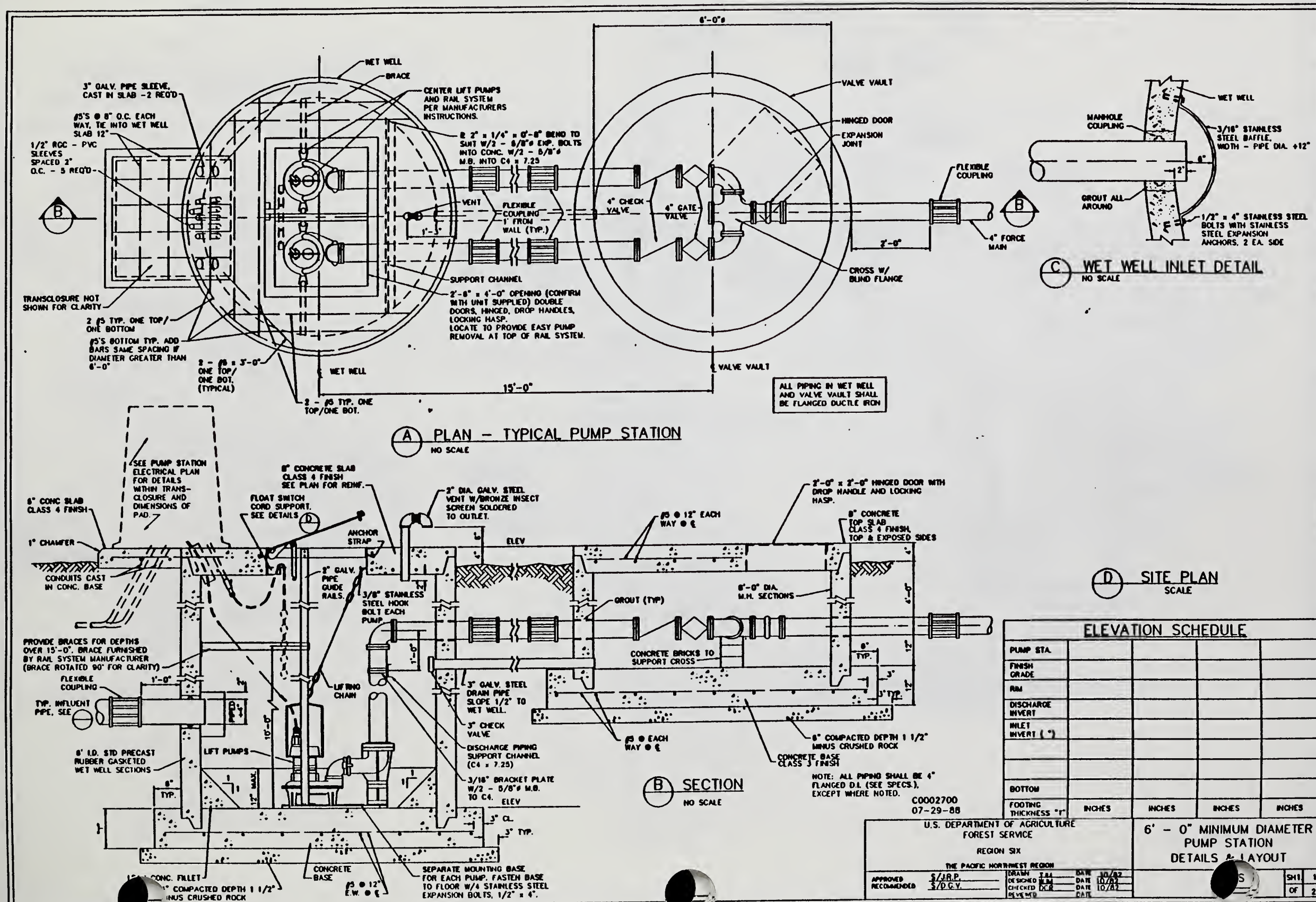
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

DRAWN ____ DATE ____
DESIGNED ____ DATE ____
CHECKED ____ DATE ____
REVIEWED ____ DATE ____

STANDARD WATER TANK

ACCESSORIES FOR CONCRETE TANK

SHT. 4 OF 4



ELEVATION SCHEDULE

PUMP STA.				
FINISH GRADE				
RIM				
DISCHARGE INVERT				
INLET INVERT (")				
BOTTOM				
FOOTING THICKNESS "f"	INCHES	INCHES	INCHES	INCHES

C0002700
07-29-88

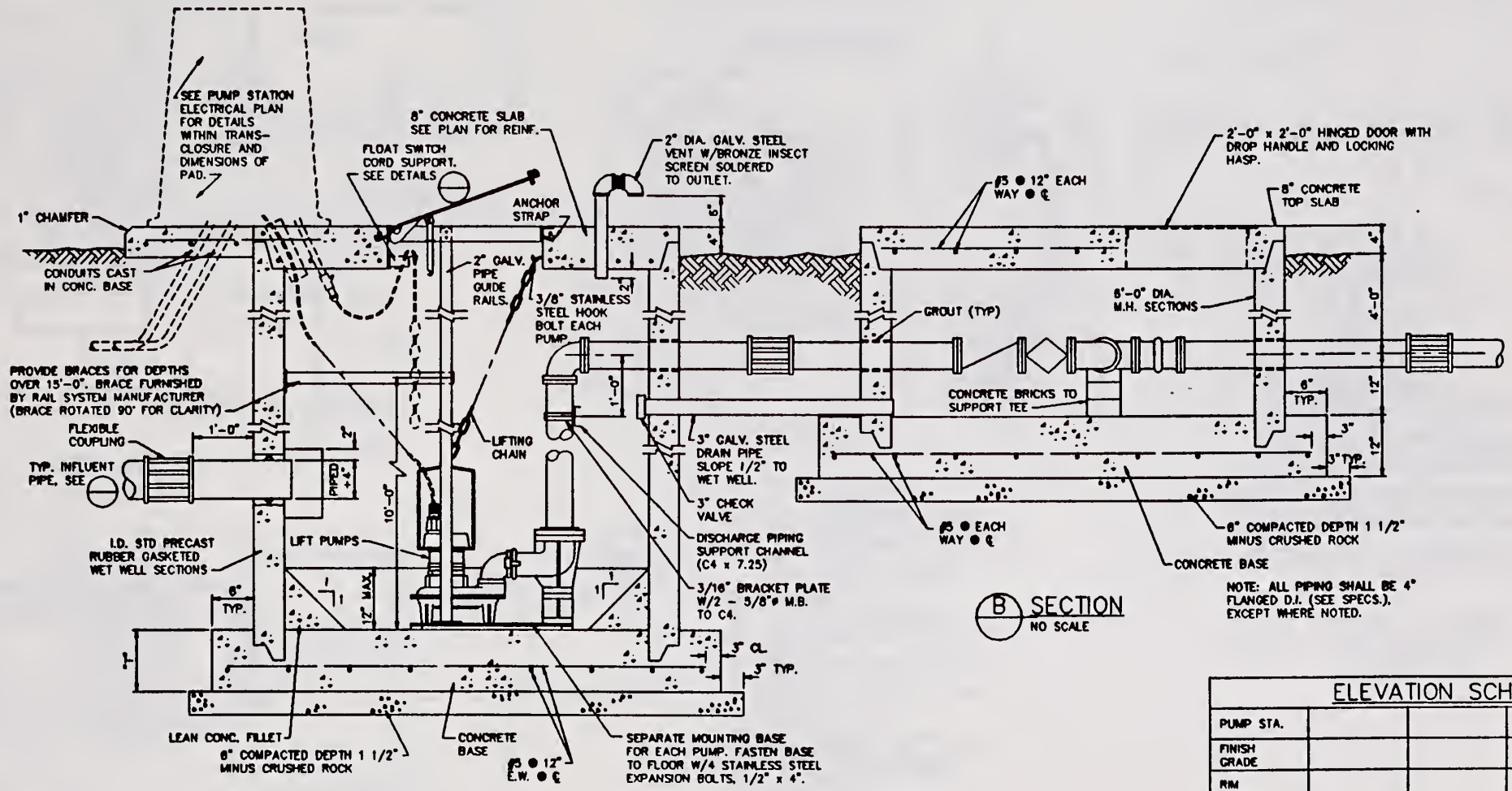
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION SIX
THE PACIFIC NORTHWEST REGION

APPROVED	S/J.R.P.		
RECOMMENDED	S/D.G.V.		
DRAWN	T.M.	DATE	10/87
DESIGNED	K.M.	DATE	10/87
CHECKED	D.C.R.	DATE	10/87
REVISED		DATE	

6' - 0" MINIMUM DIAMETER PUMP STATION DETAILS & LAYOUT

S

SH. 1 OF 2



B SECTION
NO SCALE

ELEVATION SCHEDULE

PUMP STA.				
FINISH GRADE				
RIM				
DISCHARGE INVERT				
INLET INVERT (°)				
BOTTOM				
FOOTING THICKNESS "T"	INCHES	INCHES	INCHES	INCHES

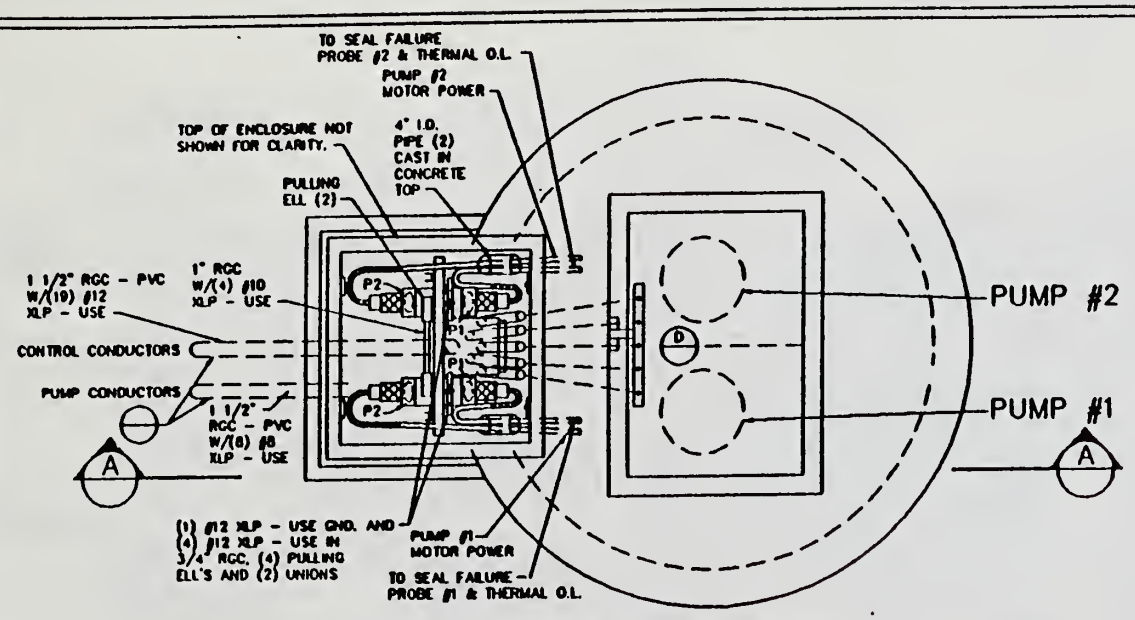
C0002701
FEB. 20,1987

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

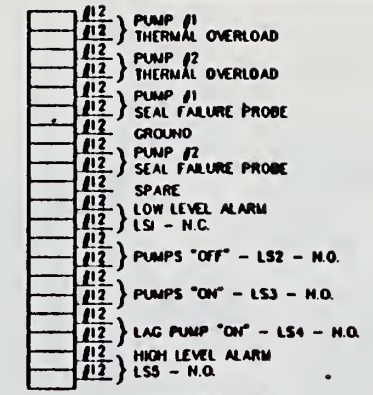
DRAWN ____ DATE ____
DESIGNED ____ DATE ____
CHECKED ____ DATE ____
REVIEWED ____ DATE ____

6'-0" MINIMUM DIAMETER
PUMP STATION
DETAILS & LAYOUT

SHT.
OF



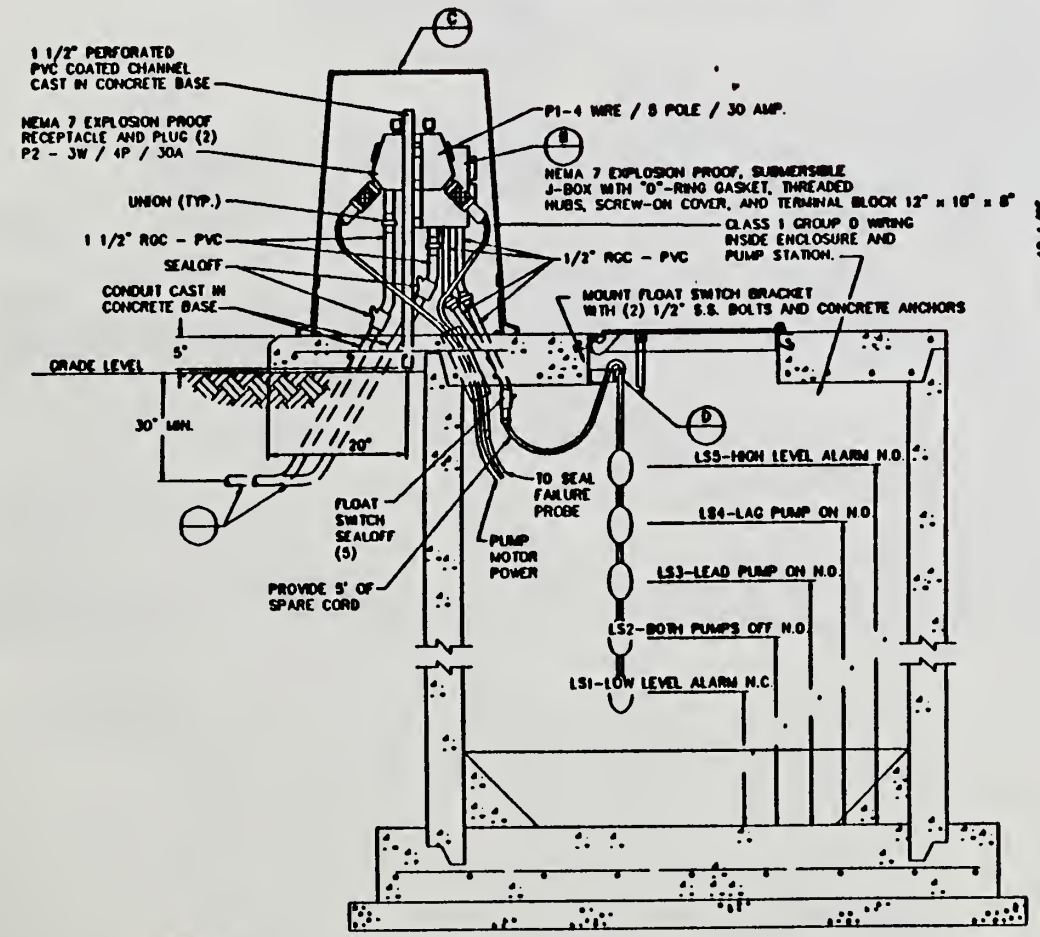
PUMP STATION PLAN
NO SCALE



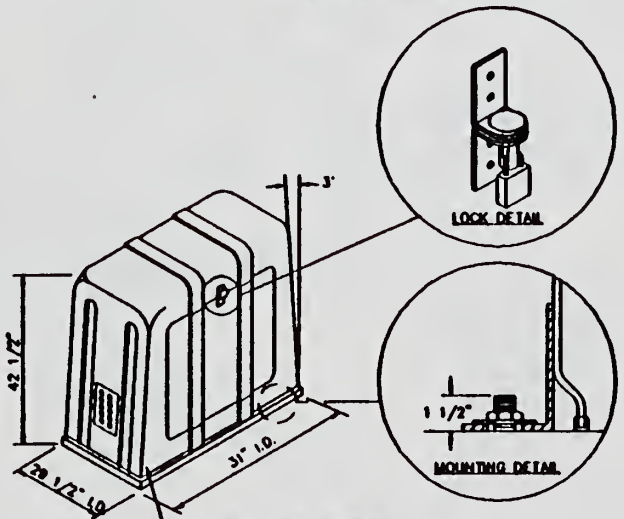
B (TERMINAL BLOCK) CONNECTIONS
NO SCALE

ELECTRICAL DESIGNER NOTES:

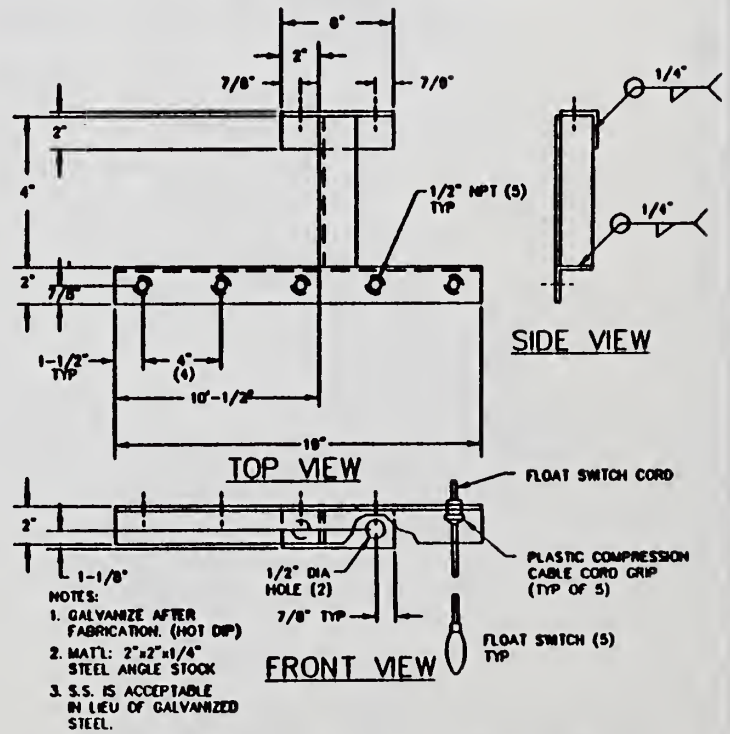
1. POWER PLUGS SIZED FOR FOLLOWING MAXIMUM PUMP HP 3HP, 1 PHASE 230V 7 1/2HP 3 PHASE 230V
2. CHECK PUMP CONDUCTOR AMPACITY AND VOLTAGE DROP FROM STATION TO CONTROL PANEL. ALSO CHECK CONDUIT SIZES.
3. DELETE SEAL FAILURE PLUGS IF NOT REQUIRED. PUMPS SMALLER THAN 10HP DO NOT USUALLY HAVE SEAL PROBES.



A SECTION A-A
NO SCALE



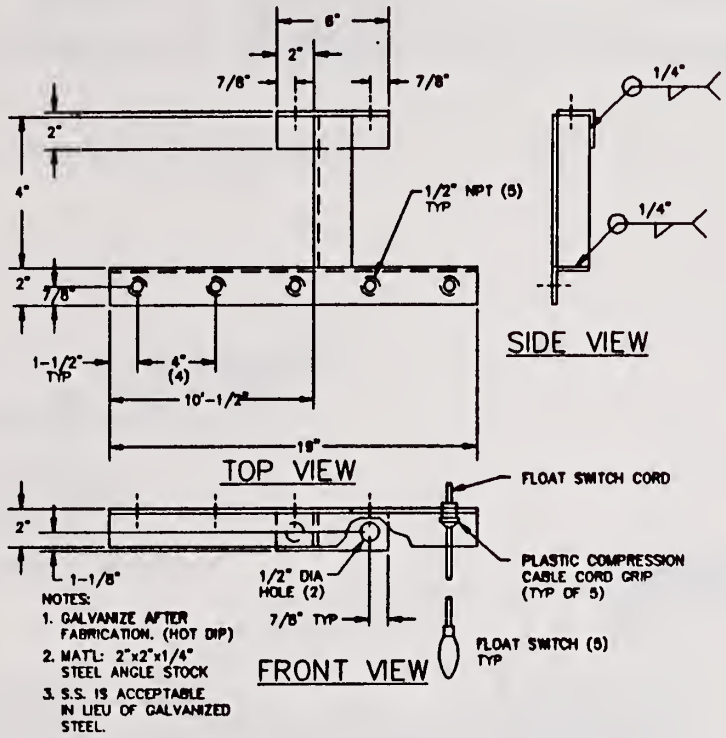
C TRANSCLOSURE DETAILS
NO SCALE



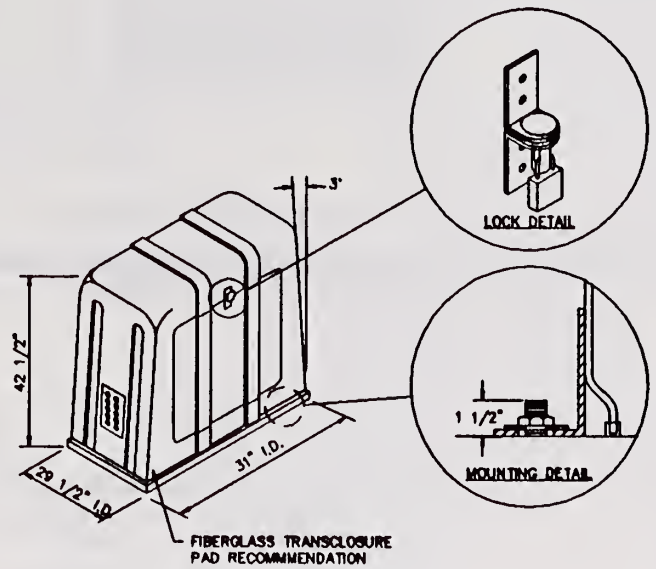
D FLOAT SWITCH CORD SUPPORT BRACKET
NO SCALE

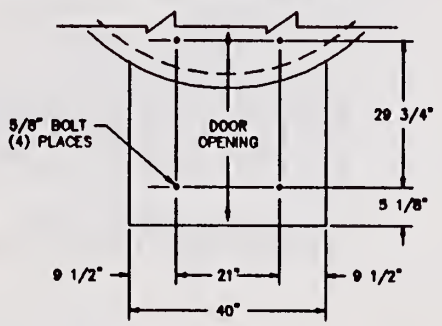
C0002800 08-08-88

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE REGION SIX THE PACIFIC NORTHWEST REGION	6' - 0" MINIMUM DIAMETER PUMP STATION DETAILS & LAYOUT
APPROVED S/J.R.P. DATE RECOMMENDED S/D.G.V. DATE DRAWN J.W. DATE 10/82 DESIGNED W.J.M. DATE 10/82 CHECKED D.C.R. DATE 10/82 REVISED DATE	DUPLEX PU[illegible]TION ELECTRICA[illegible]AN SHT 2 OF 2



D FLOAT SWITCH CORD SUPPORT BRACKET
NO SCALE





C TRANSCLOSURE DETAILS
NO SCALE

#12 } PUMP #1 THERMAL OVERLOAD
#12 } PUMP #2 THERMAL OVERLOAD
#12 } PUMP #1 SEAL FAILURE PROBE
#12 GROUND
#12 } PUMP #2 SEAL FAILURE PROBE
#12 SPARE
#12 } LOW LEVEL ALARM LS1 – N.C.
#12 } PUMPS "OFF" – LS2 – N.O.
#12 } PUMPS "ON" – LS3 – N.O.
#12 } LAG PUMP "ON" – LS4 – N.O.
#12 } HIGH LEVEL ALARM LS5 – N.O.

(LOCATED IN J-BOX)

B (TERMINAL BLOCK) CONNECTIONS
NO SCALE

C0002801
FEB. 25,1987

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

DRAWN DATE
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

DUPLEX PUMP STATION
ELECTRICAL DETAILS

SHT.
OF

SCALE: _____

ELEV.

STA.

ELEV.

STA.

C0002900 APRIL 5,1988

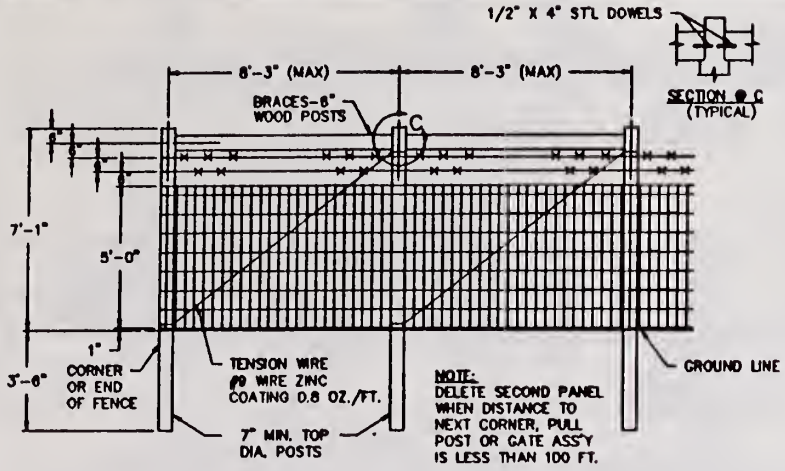
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

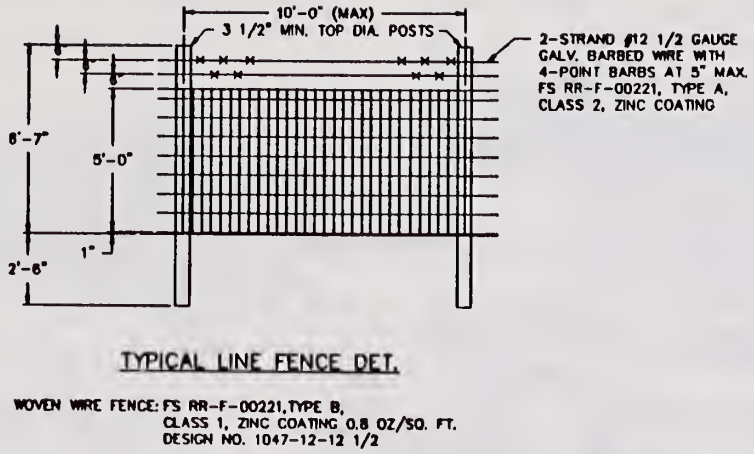
DRAWN _____ DATE _____
DESIGNED _____ DATE _____
CHECKED _____ DATE _____
REVIEWED _____ DATE _____

PLAN & PROFILE

SHT.
OF

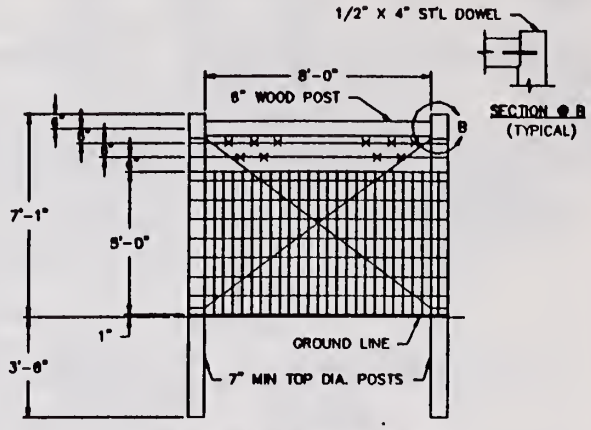


CORNER OR END PANEL ASS'Y

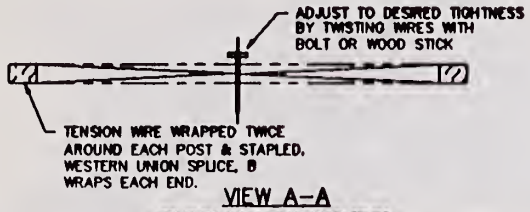


TYPICAL LINE FENCE DET.

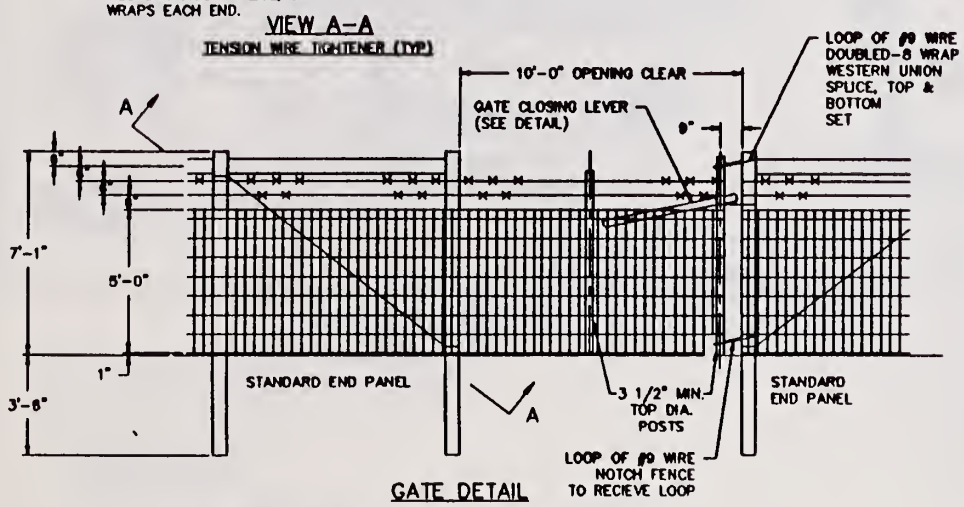
WOVEN WIRE FENCE: FS RR-F-00221, TYPE B, CLASS 1, ZINC COATING 0.8 OZ/SQ. FT. DESIGN NO. 1047-12-12 1/2



PULL POST ASSEMBLY

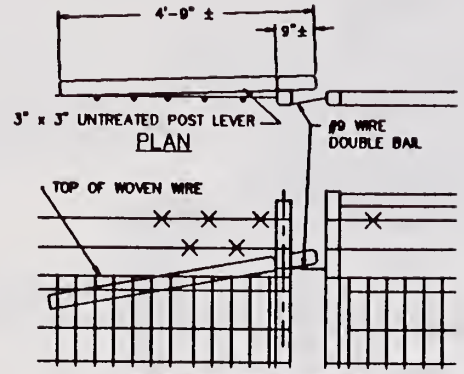


VIEW A-A
TENSION WIRE TIGHTENER (TYP)



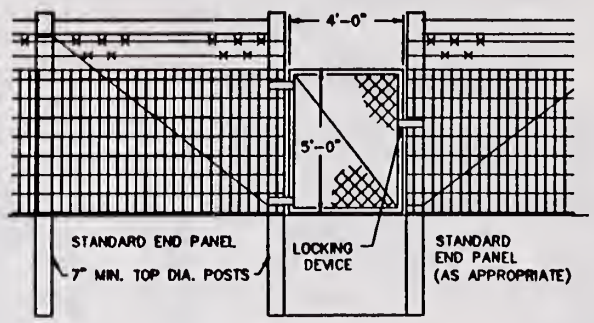
GATE DETAIL

NOTE: LEVER BAIL TO BE SIZED TO PERMIT TIGHT CLOSURE



GATE CLOSING LEVER

NOTE: LEVER BAIL TO BE SIZED TO PERMIT TIGHT CLOSURE



STEEL PANEL GATE

GATE FRAME: 1 1/4" STD PIPE, 2.27 #/FT. FS RR-F-183
OR 1 1/2" SQUARE 1.90 #/FT.

F.S.BRIC, HINGES, LATCHES: IN ACCORDANCE WITH F.S. RR-F-183
THE LATCH SHALL BE SUITABL
FOR LOCKING WITH A PADLOCK

DATE	BY	DRN	REVISION
			DELETE MATERIAL & SPECIFICATION
1/79	DCR	CAB	REFERENCES.
9/87	MM		CHG.HEIGHT

C0003000
OCT. '87

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

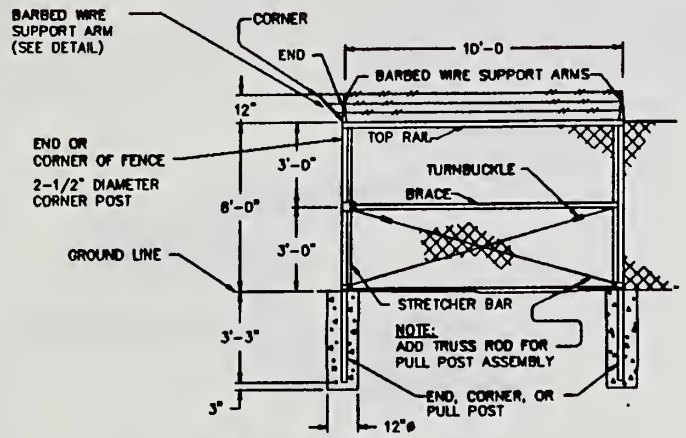
REGION SIX
THE PACIFIC NORTHWEST REGION

APPROVED
RECOMMENDED

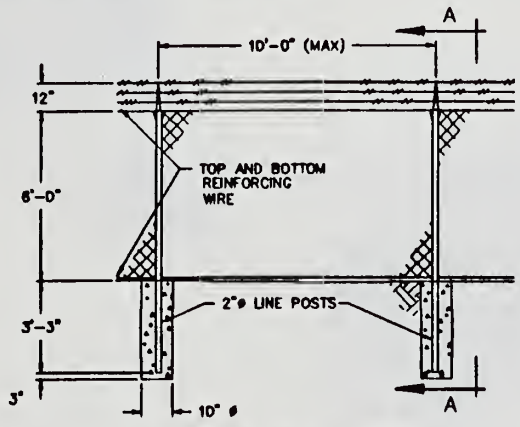
DRAWN DATE
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

5'-0" WOVEN WIRE FENCE WITH WOOD POSTS STANDARD DETAILS

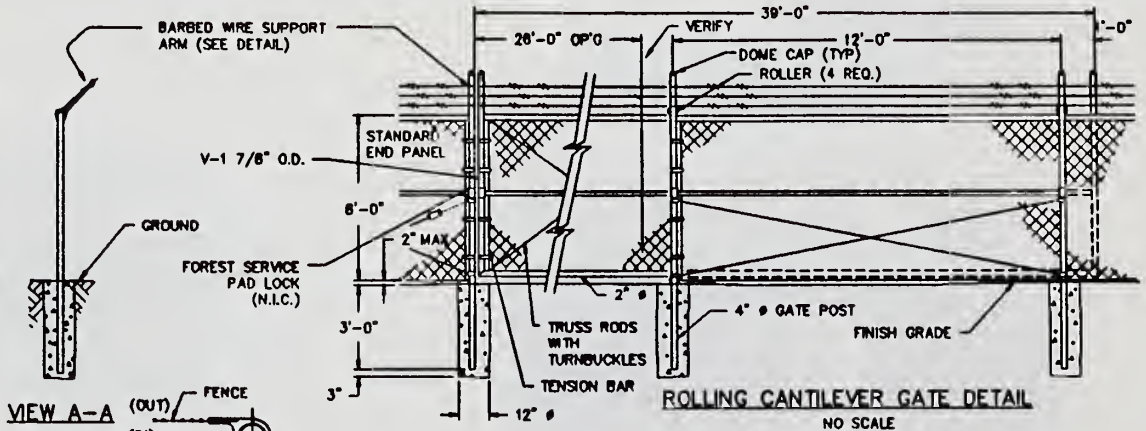
SHT. 1
OF 1



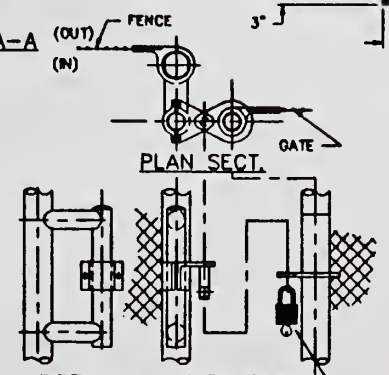
CORNER OR END PANEL ASS'Y
PULL POST ASS'Y SIMILAR (EXCEPT AS INDICATED)
SCALE: 3/8" = 1'-0"



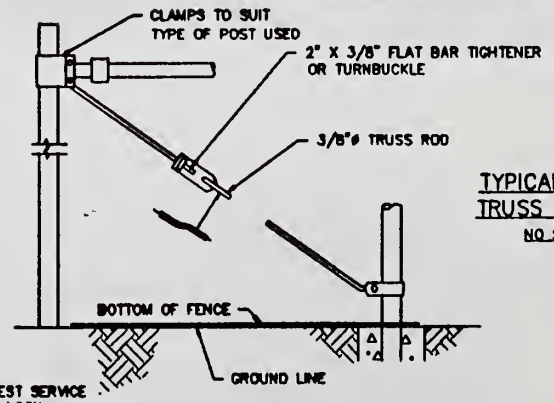
TYPICAL LINE FENCE DETAIL
SCALE: 3/8" = 1'-0"



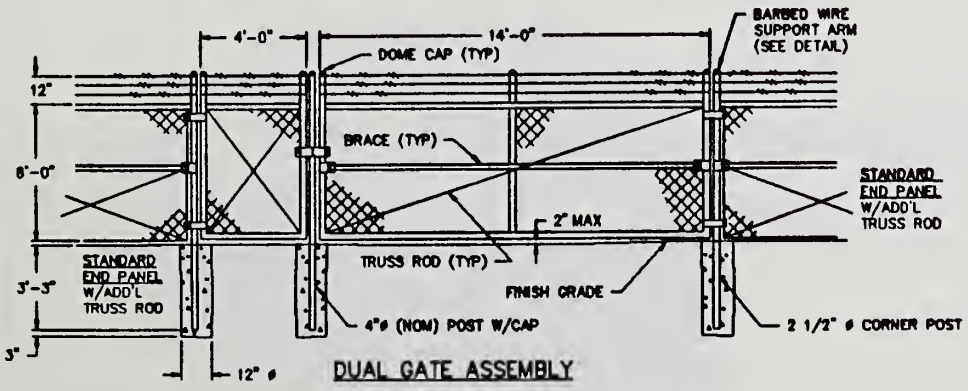
ROLLING CANTILEVER GATE DETAIL
NO SCALE



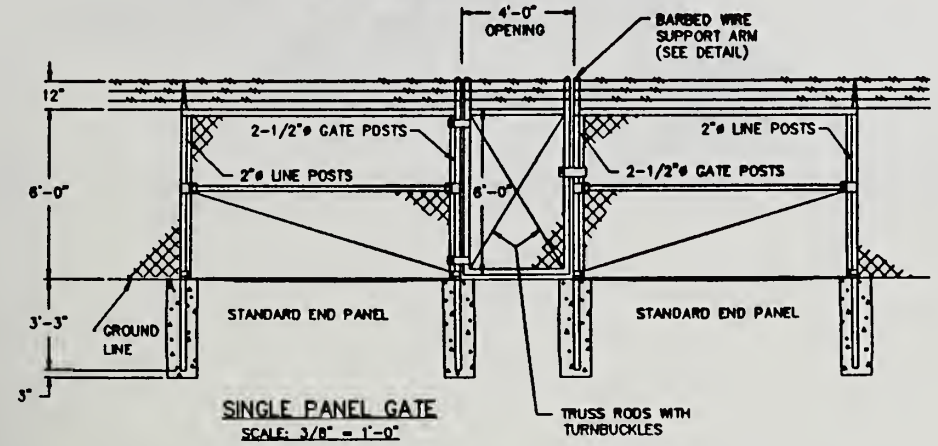
GATE LATCH DETAIL
NO SCALE



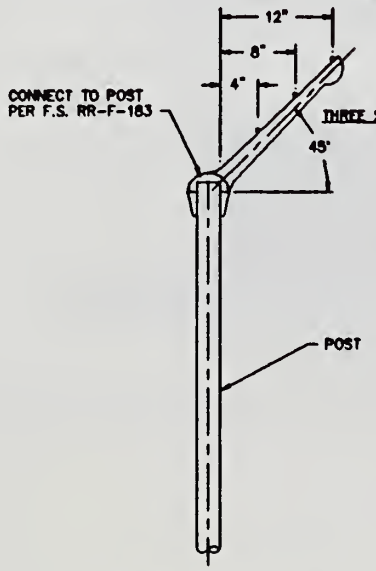
TYPICAL DETAIL
TRUSS ROD TIES
NO SCALE



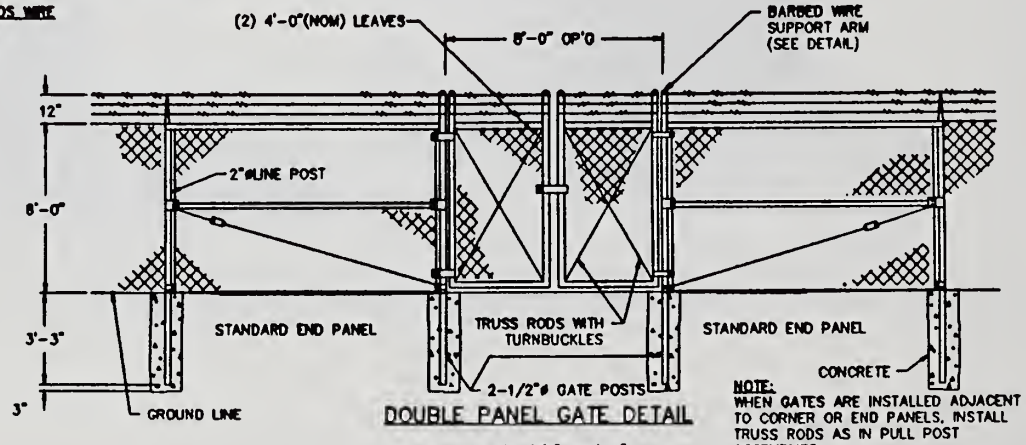
DUAL GATE ASSEMBLY



SINGLE PANEL GATE
SCALE: 3/8" = 1'-0"



DETAIL BARBED WIRE
SUPPORT ARM AND POST CAP
SCALE: 1-1/2"



DOUBLE PANEL GATE DETAIL
SCALE: 3/8" = 1'-0"

NOTE:
WHEN GATES ARE INSTALLED ADJACENT TO CORNER OR END PANELS, INSTALL TRUSS RODS AS IN PULL POST ASSEMBLIES.

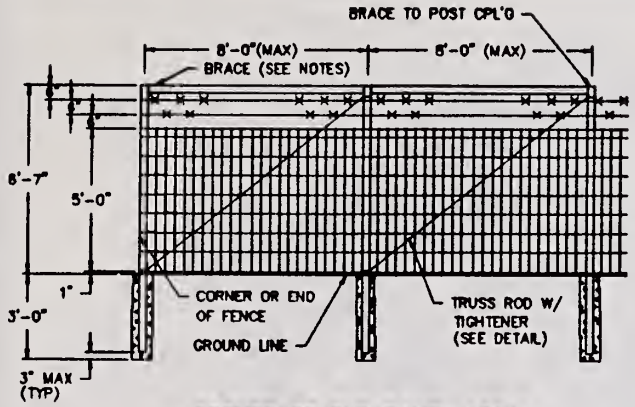
C0003100
OCT. '87

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION SIX
THE PACIFIC NORTHWEST REGION

APPROVED
RECOMMENDED
DRAWN DATE
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

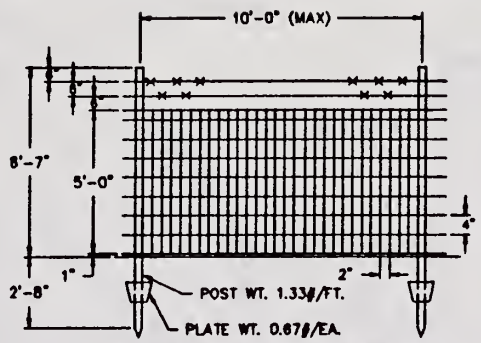
6'-0" CHAIN LINK FE S
STANDARD DETAILS

SHT. 1
OF 1

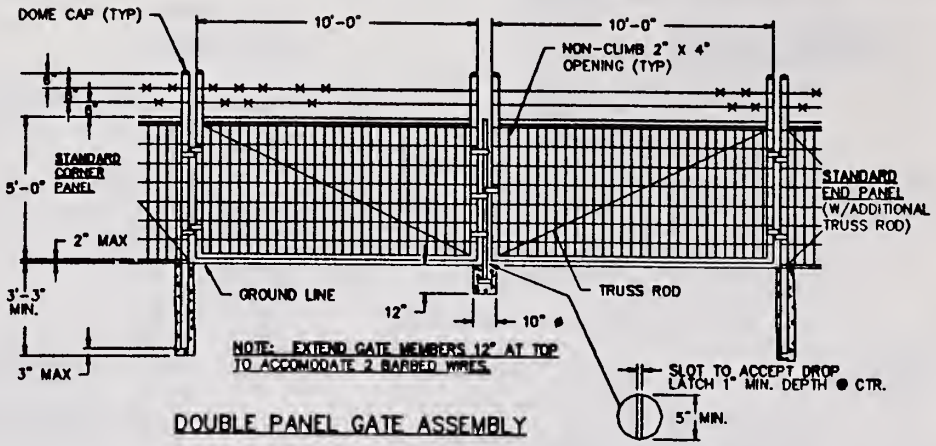


CORNER OR END PANEL ASS'Y.

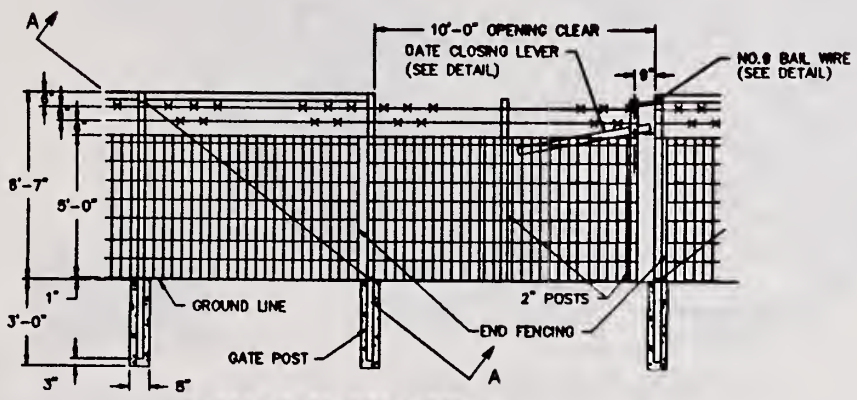
NOTE: DELETE SECOND PANEL WHEN DISTANCE TO NEXT CORNER, PULL POST, OR GATE ASSEMBLY IS LESS THAN 100 FEET.



TYPICAL LINE FENCE DETAIL
"U" OR "T" TYPE STEEL POSTS

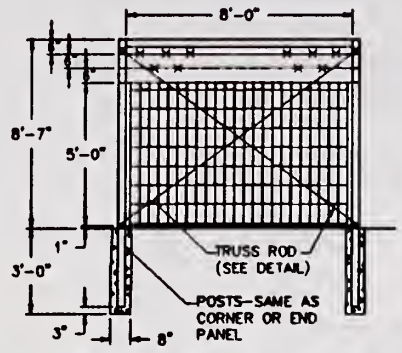


DOUBLE PANEL GATE ASSEMBLY

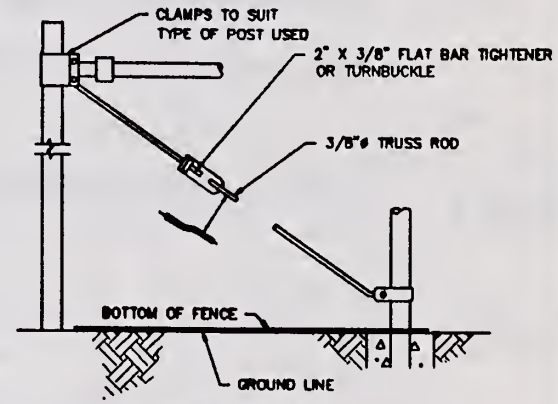


SINGLE PANEL GATE DETAIL

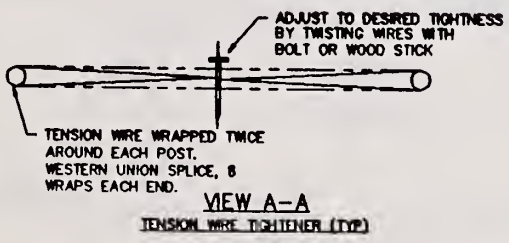
NOTE: LEVER BAIL TO BE SIZED TO PERMIT TIGHT CLOSURE



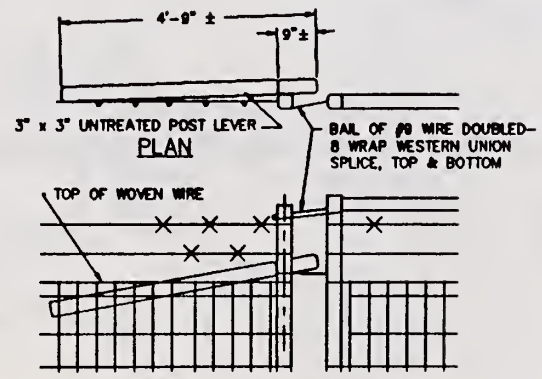
PULL POST ASSEMBLY



TYPICAL DETAIL
TRUSS ROD TIES



VIEW A-A
TENSION WIRE TIGHTENER (TYP)



GATE CLOSING LEVER

NOTE: LEVER BAIL TO BE SIZED TO PERMIT TIGHT CLOSURE

STEEL POST NOTES:

WOVEN WIRE: NON-CLIMB 2" X 4" OPENING

BRACES: 1 1/4" ROUND (2.27#/FT.), 1 1/2" SQ. (1.90#/FT.)
H-1 1/2" X 1 5/16" X 1/8" (2.27#/FT.
FS RR-F-183.

TRUSS RODS: 3/8"ø WITH TIGHTENER (SEE DETAIL) FS RR-F-183.

POSTS: 2"ø (3.56#) STOCK; FS RR-F-183.

DATE	BY	DRN	REVISION
			DELETE MATERIAL & SPECIFICATION
1/79	DCR	CAB	REFERENCES.
9/87	MM		CHG.HEIGHT-ADD STL POST NOTES

C0003200
OCT. '87

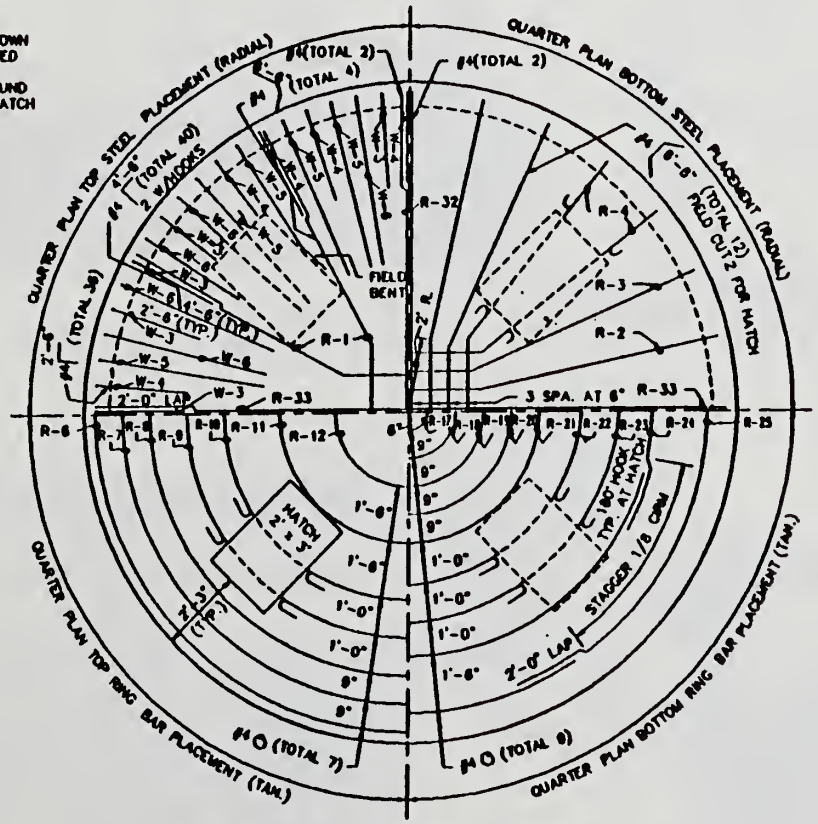
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION SIX
THE PACIFIC NORTHWEST REGION

APPROVED
RECOMMENDED
DRAWN DATE
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

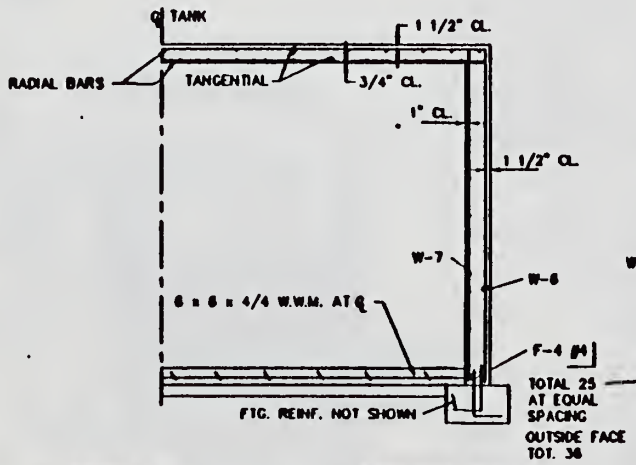
5'-0" WOVEN WIRE FENCE WITH STEEL POSTS (STANDARD DETAILS)

SHT. 1
OF 1

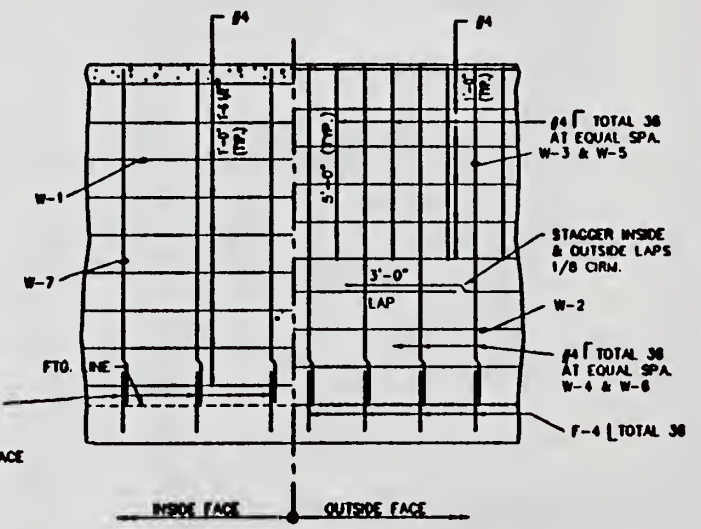
NOTE:
HATCH LOCATION SHOWN BY SOLID LINE. DOTTED HATCH LINE SHOWS REINFORCEMENT AROUND HATCH. ONLY ONE HATCH IN WATER TANK.



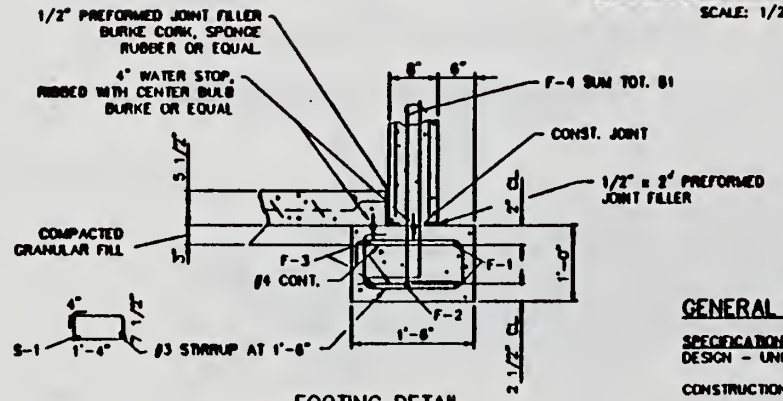
ROOF REINFORCING STEEL PLAN
SCALE: 1/2" = 1'-0"



ROOF, WALL, SLAB REINFORCEMENT SECTION
SCALE: 1/2" = 1'-0"



WALL ELEVATION REINFORCEMENT
SCALE: 1/2" = 1'-0"



FOOTING DETAIL
SCALE: 1" = 1'-0"

GENERAL NOTES:

SPECIFICATION:
DESIGN - UNIFORM BUILDING CODE 1976.

CONSTRUCTION - FOREST SERVICE BUILDINGS & FACILITIES CONSTRUCTION SPEC. AND SPECIAL PROVISIONS

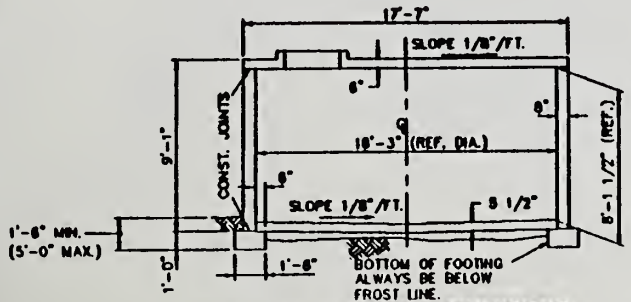
LIVE LOAD: 150 PSF ROOF, 50 PSF WALL

UNIT STRESSES & MATERIALS:

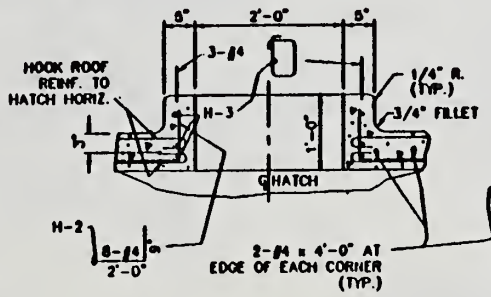
CONCRETE - 7 BAGS/YD^3 ~ VIBRATED
f'_c = 3000 PSI, f_c = 1200 PSI, f_t = 300 PSI

REINFORCING STEEL - ASTM A615 GRADE 40
f_y = 40,000 PSI, f_t = 20,000 PSI, f_t = 14,000 (WALL) PSI

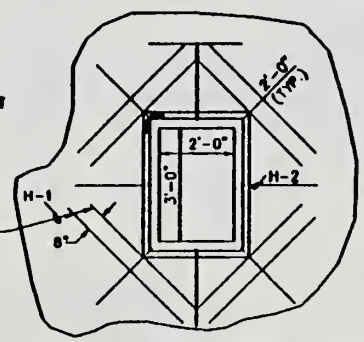
FOUNDATION BEARINGS - DRAINED DENSE INORGANIC MATERIALS, EXCLUSIVE OF CLAY
P = 1500 PSF.



TANK SECTION & DIMENSIONS
SCALE: 1/4" = 1'-0"



HATCH SECTION
SCALE: 1" = 1'-0"



HATCH PLAN
SCALE: 1/2" = 1'-0"

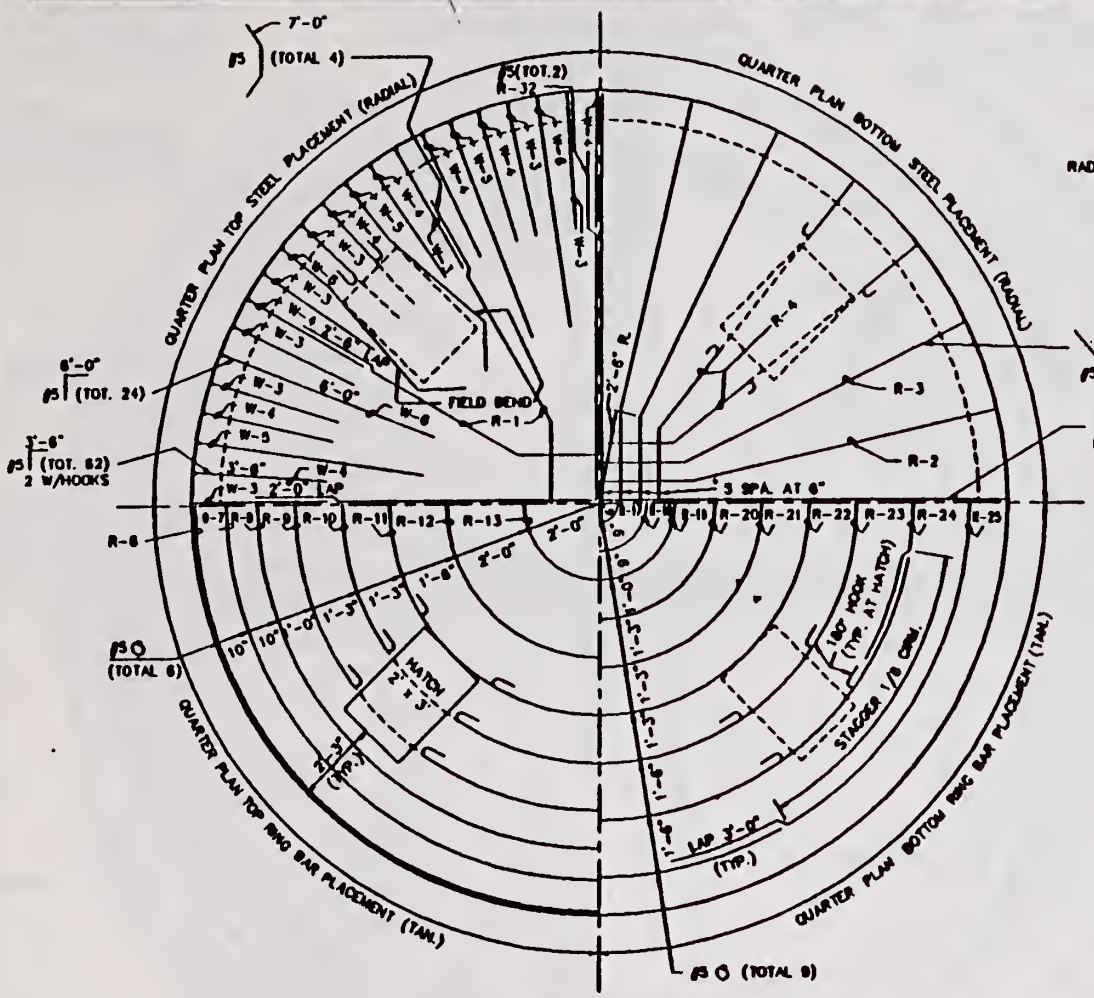
DWG. NO.
C0004000
17 DEC 87

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION FIVE
THE PACIFIC SOUTHWEST REGION

RECOMMENDED	S/A W.L.	DATE 7-29-76	DRAWN	S/A P.	DATE 7-29-76
APPROVED	S/T D.K.	DATE 7-30-76	DESIGNED	S/A H.	DATE 7-76
			CHECKED	S/A W.L.	DATE 7-76
			REVIEWED	S/A A.	DATE 7-30-76

STANDARD WATER TANK
10,000 GAL. CAPACITY
DIMENSIONS AND R[illegible]T

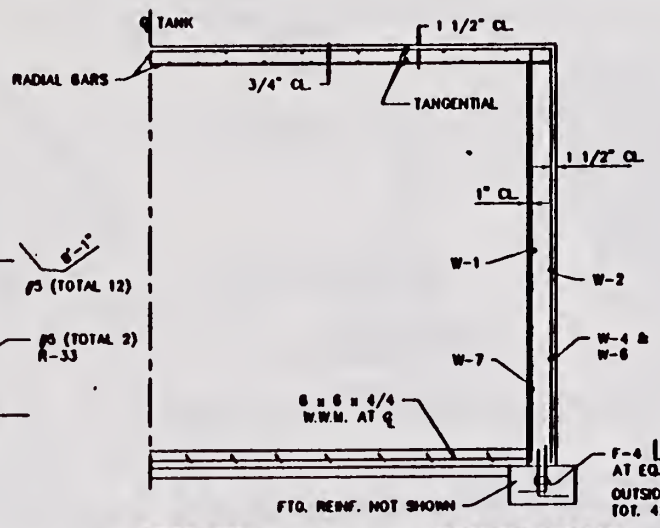
SHT 1
OF 3



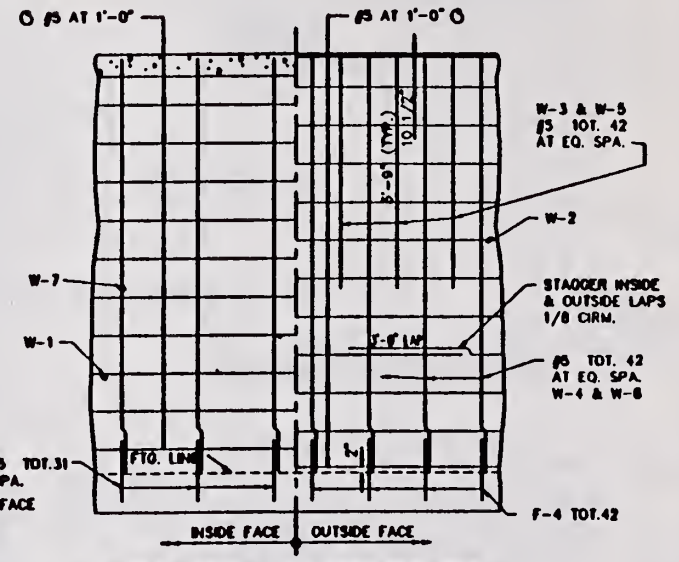
ROOF REINFORCING STEEL PLAN
SCALE: 1/2" = 1'-0"

NOTE:

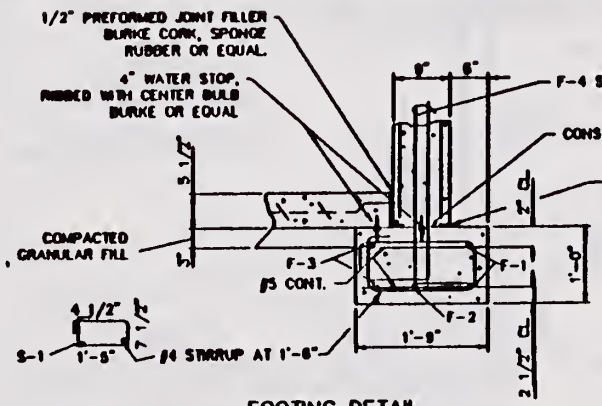
HATCH LOCATIONS SHOWN BY SOLID LINE, DOTTED HATCH LINE SHOWS REINFORCEMENT AROUND HATCH ONLY. ONLY ONE HATCH IN WATER TANK.



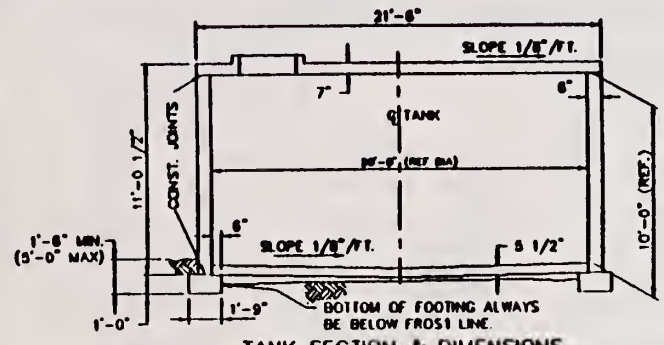
ROOF, WALL, SLAB REINFORCEMENT SECTION
SCALE: 1/2" = 1'-0"



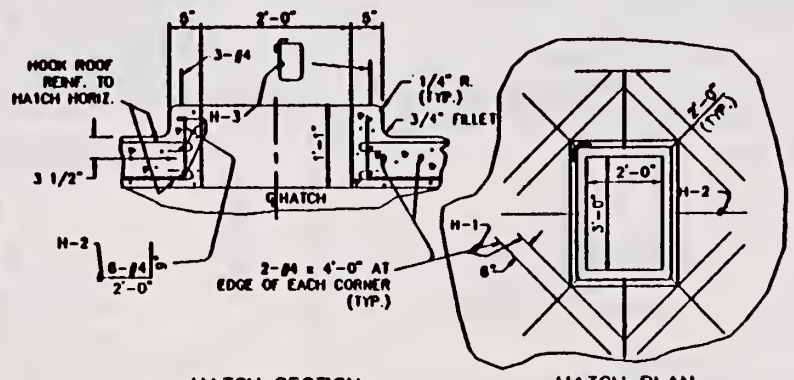
WALL ELEVATION REINFORCEMENT
SCALE: 1/2" = 1'-0"



FOOTING DETAIL
SCALE: 1" = 1'-0"



TANK SECTION & DIMENSIONS
SCALE: 1/4" = 1'-0"



HATCH SECTION
SCALE: 1" = 1'-0"

HATCH PLAN
SCALE: 1/2" = 1'-0"

GENERAL NOTES:

SPECIFICATION:
DESIGN - UNIFORM BUILDING CODE 1976.

CONSTRUCTION - FOREST SERVICE BUILDINGS & FACILITIES CONSTRUCTION SPEC. AND SPECIAL PROVISIONS

LIVE LOAD: 150 PSF ROOF, 50 PSF WALL

UNIT STRESSES & MATERIALS:

CONCRETE - 7 BAGS/YD^3 - VIBRATED
f'_c = 3000 PSI, f_c = 1200 PSI, f_t = 300 PSI

REINFORCING STEEL - ASTM A615 GRADE 40
f_y = 40,000 PSI, f_t = 20,000 PSI, f_t = 14,000 (WALL) PSI

FOUNDATION BEARINGS - DRAINED DENSE INORGANIC MATERIALS, EXCLUSIVE OF CLAY
P = 1500 PSF.

DWG. NO.
C0004100
17 DEC 87

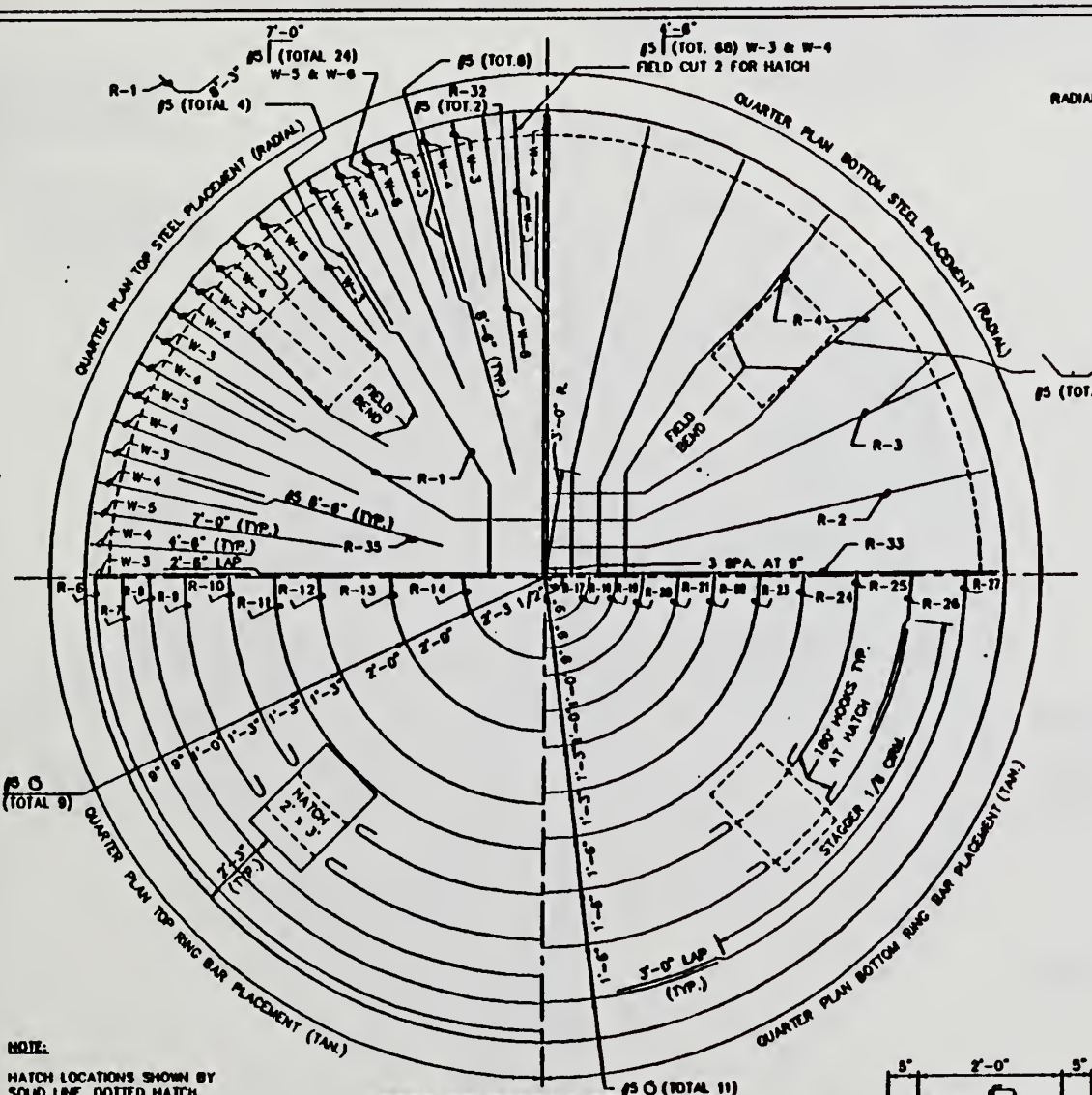
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION FIVE
THE PACIFIC SOUTHWEST REGION

RECOMMENDED [illegible] DATE 12-16-87
APPROVED [illegible] DATE 12-16-87
DRAWN [illegible] DATE 12-16-87
DESIGNED [illegible] DATE 12-16-87
CHECKED [illegible] DATE 12-16-87
REVIEWED [illegible] DATE 12-17-87

STANDARD WATER TANK
20,000 GAL. CAPACITY

DIMENSIONS AND REINFORCEMENT

SHT. 1 OF 3

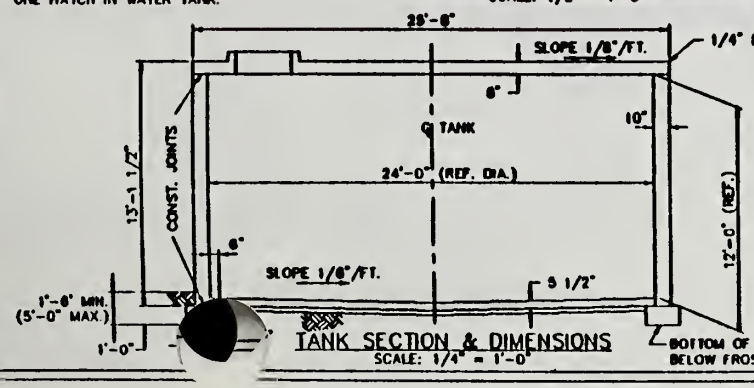


ROOF REINFORCING STEEL PLAN

SCALE: 1/2" = 1'-0"

NOTE:

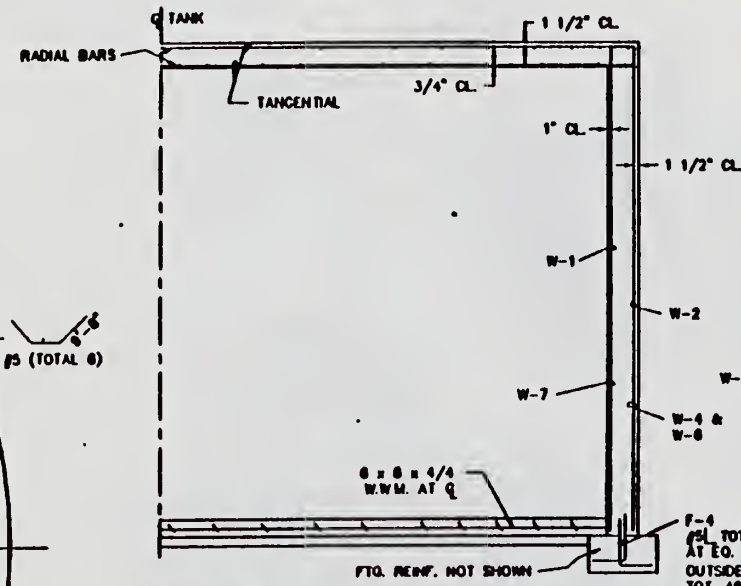
HATCH LOCATIONS SHOWN BY SOLID LINE, DOTTED HATCH LINE SHOWS REINFORCEMENT AROUND HATCH ONLY. ONLY ONE HATCH IN WATER TANK.



TANK SECTION & DIMENSIONS

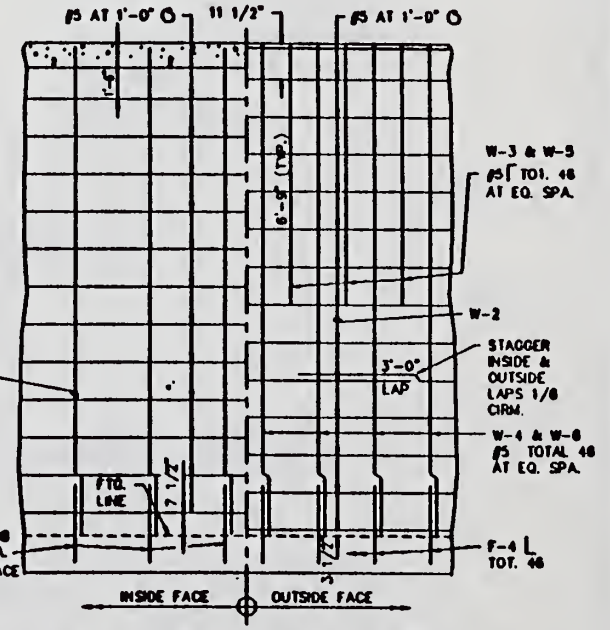
SCALE: 1/4" = 1'-0"

BOTTOM OF FOOTING ALWAYS BE BELOW FROST LINE.



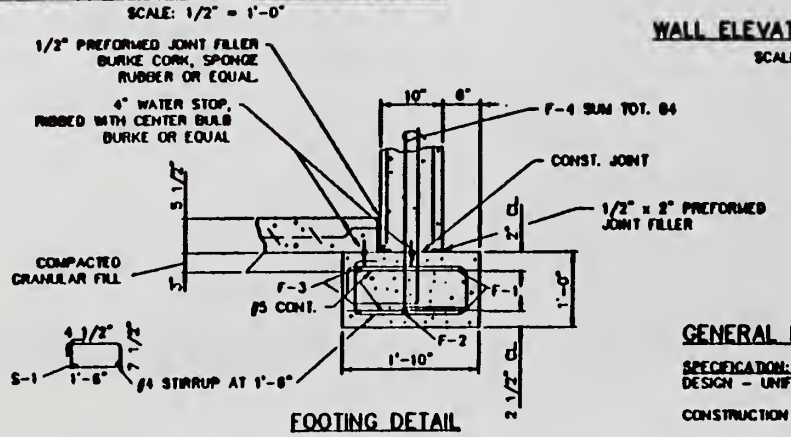
ROOF, WALL, SLAB REINFORCEMENT SECTION

SCALE: 1/2" = 1'-0"



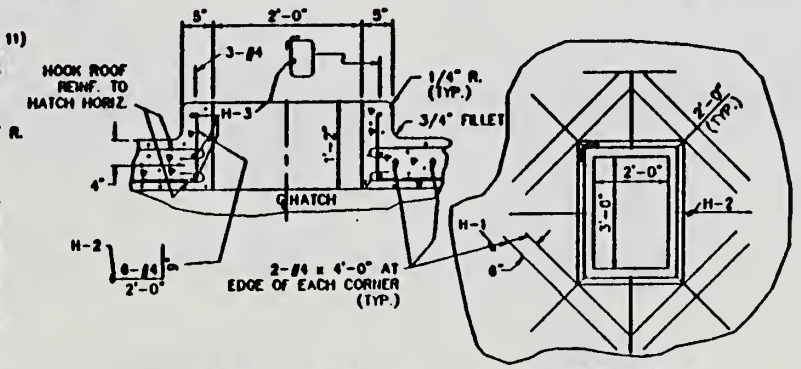
WALL ELEVATION REINFORCEMENT

SCALE: 1/2" = 1'-0"



FOOTING DETAIL

SCALE: 1" = 1'-0"



HATCH SECTION

SCALE: 1" = 1'-0"

HATCH PLAN

SCALE: 1/2" = 1'-0"

GENERAL NOTES:

SPECIFICATION:
DESIGN - UNIFORM BUILDING CODE 1976.

CONSTRUCTION - FOREST SERVICE BUILDINGS & FACILITIES CONSTRUCTION SPEC. AND SPECIAL PROVISIONS

LIVE LOAD: 150 PSF ROOF, 50 PSF WALL

UNIT STRESSES & MATERIALS:

CONCRETE - 7 BAGS/YD^3 ~ VIBRATED
f'_c = 3000 PSI, f_c = 1200 PSI, f_t = 300 PSI

REINFORCING STEEL - ASTM A615 GRADE 40
f_y = 40,000 PSI, f_t = 20,000 PSI, f_t = 14,000 (WALL) PSI

FOUNDATION BEARINGS - DRAINED DENSE INORGANIC MATERIALS, EXCLUSIVE OF CLAY
P = 1500 PSF.

DWG. NO.
C0004200
18 DEC 87

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION FIVE
THE PACIFIC SOUTHWEST REGION

RECOMMENDED	W.L.	DATE 7-10-78	DRAWN	A.P.	DATE 7-1-78
APPROVED	DATE	DATE 7-30-78	DESIGNED	W.L.	DATE 7-78
			CHECKED	W.L.	DATE 7-78
			REVIEWED	A.A.	DATE 7-10-78

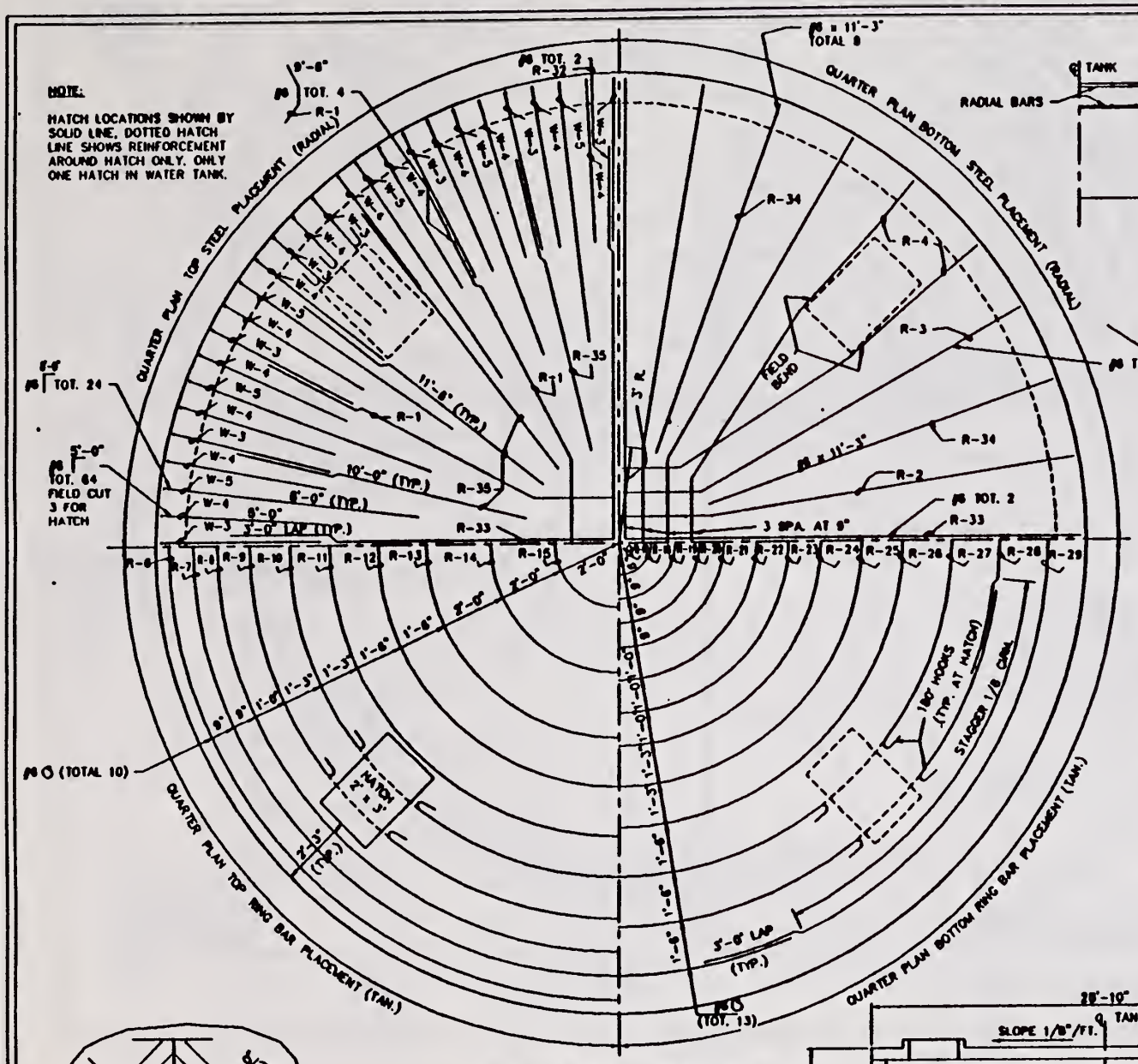
STANDARD WATER TANK
35,000 GAL. CAPACITY

DIMENSIONS AND R... T

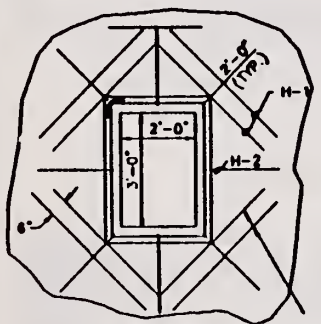
SHT 1
OF 3

NOTE:

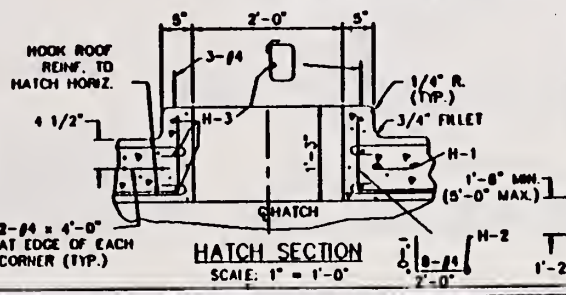
HATCH LOCATIONS SHOWN BY SOLID LINE, DOTTED HATCH LINE SHOWS REINFORCEMENT AROUND HATCH ONLY. ONLY ONE HATCH IN WATER TANK.



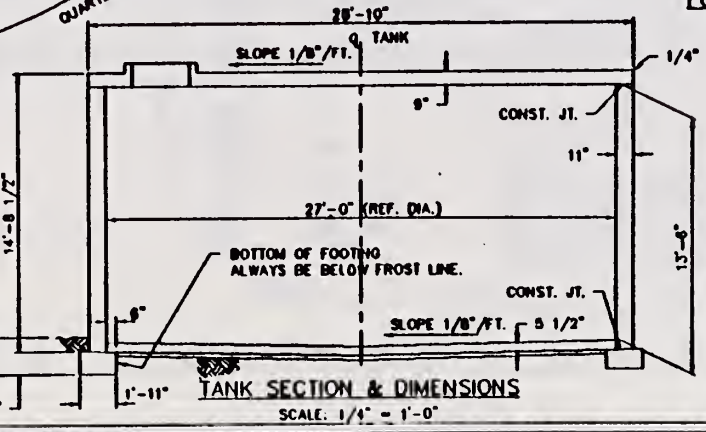
ROOF REINFORCING STEEL PLAN
SCALE: 1/2" = 1'-0"



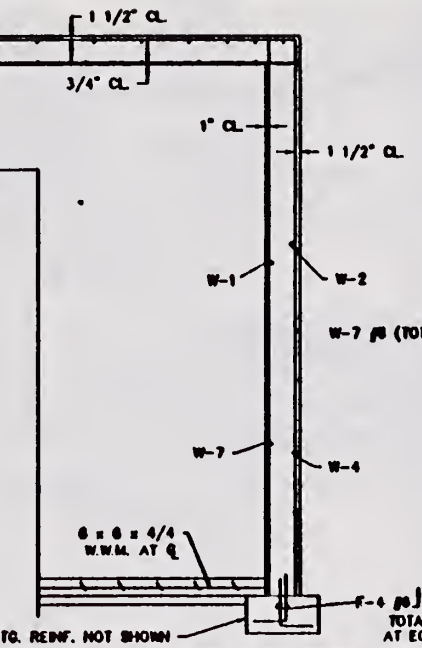
HATCH PLAN
SCALE: 1/2" = 1'-0"



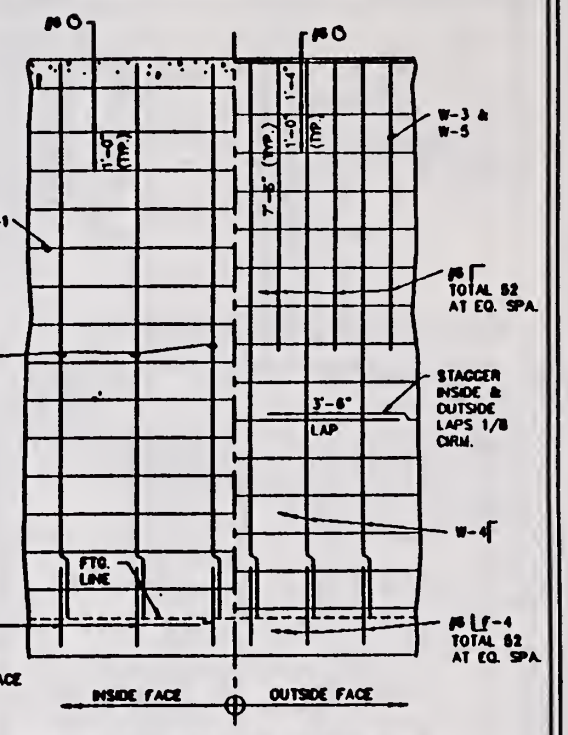
HATCH SECTION
SCALE: 1" = 1'-0"



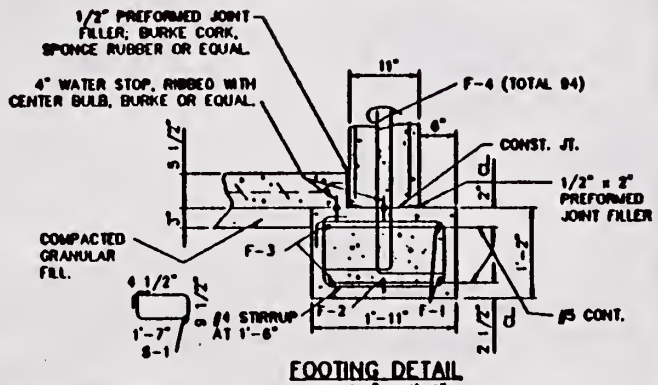
TANK SECTION & DIMENSIONS
SCALE: 1/4" = 1'-0"



ROOF, WALL, SLAB REINFORCEMENT SECTION
SCALE 1/2" = 1'-0"



WALL ELEVATION REINFORCEMENT
SCALE: 1/2 = 1'-0"



FOOTING DETAIL
SCALE 1" = 1'-0"

GENERAL NOTES:

SPECIFICATION:
DESIGN - UNIFORM BUILDING CODE 1976.

CONSTRUCTION - FOREST SERVICE BUILDINGS & FACILITIES CONSTRUCTION SPEC. AND SPECIAL PROVISIONS

LIVE LOAD: 180 PSF ROOF, 50 PSF WALL

UNIT STRESSES & MATERIALS:

CONCRETE - 7 BAGS/YD^3 ~ VIBRATED
f'_c = 3000 PSI, f_c = 1200 PSI, f_t = 300 PSI

REINFORCING STEEL - ASTM A615 GRADE 40
f_y = 40,000 PSI, f_t = 20,000 PSI, f_t = 14,000 (WALL) PSI

FOUNDATION BEARINGS - DRAINED DENSE INORGANIC MATERIALS, EXCLUSIVE OF CLAY
P = 1500 PSF.

OWO. NO.
C0004300
17 DEC 87

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION FIVE
THE PACIFIC SOUTHWEST REGION

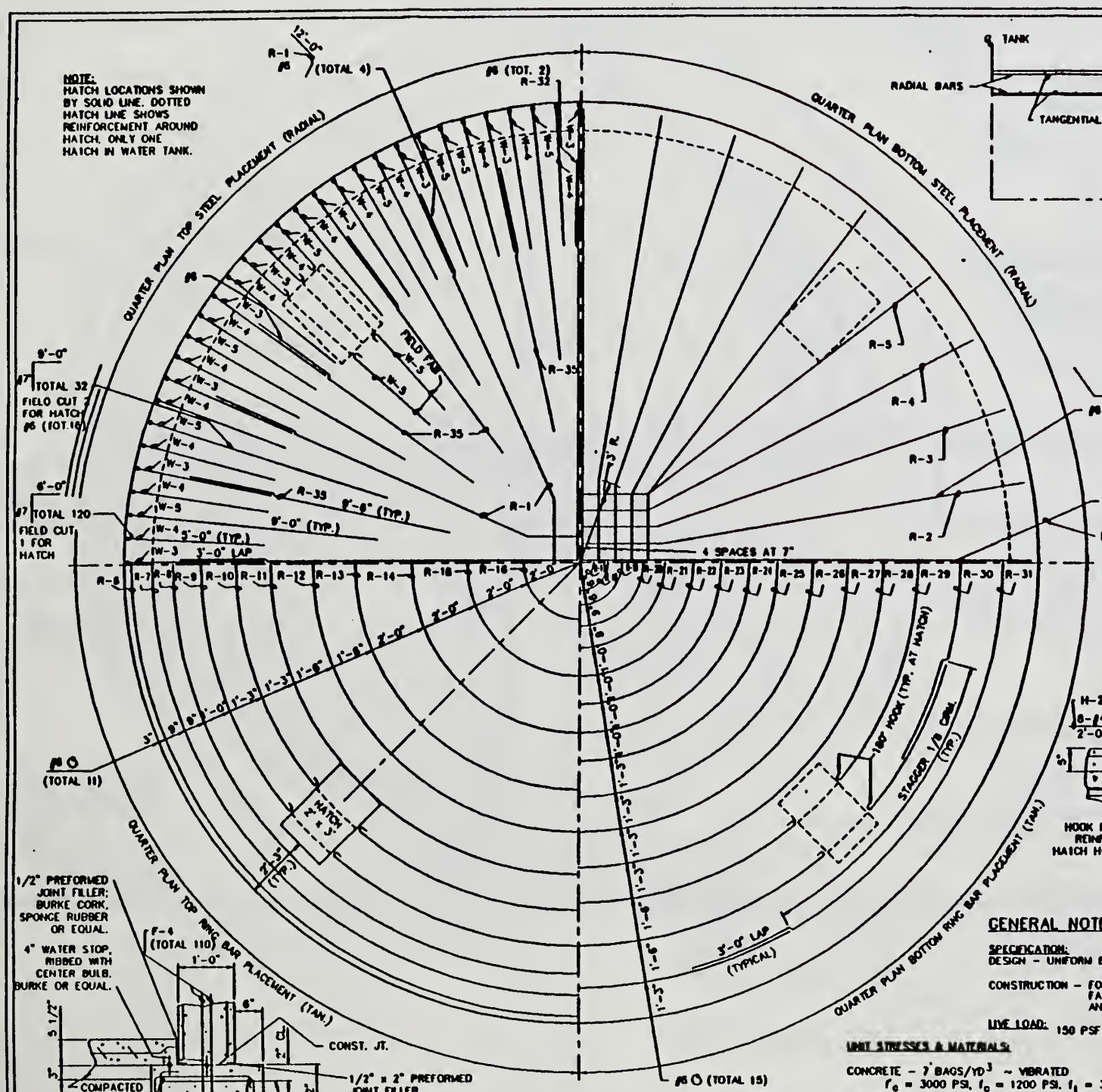
RECOMMENDED	DATE	DRAWN	DATE		
APPROVED	DATE	DESIGNED	DATE		
		CHECKED	DATE		
		REVIEWED	DATE		

STANDARD WATER TANK
50,000 GAL. CAPACITY

DIMENSIONS AND REINFORCEMENT

SHT. 1 OF 3

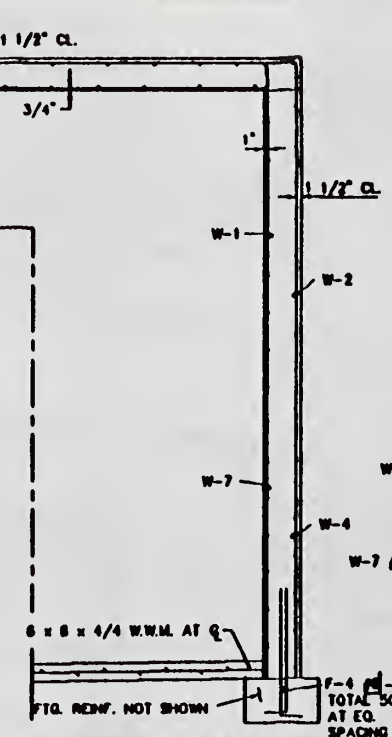
NOTE:
HATCH LOCATIONS SHOWN BY SOLID LINE. DOTTED HATCH LINE SHOWS REINFORCEMENT AROUND HATCH. ONLY ONE HATCH IN WATER TANK.



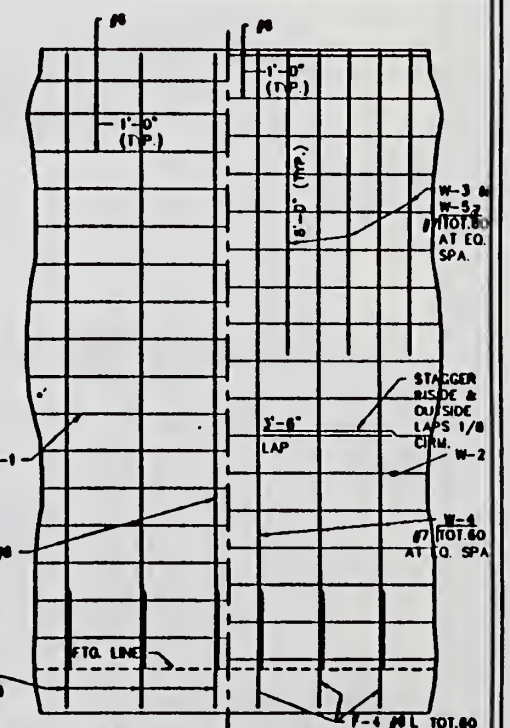
ROOF REINFORCING STEEL PLAN
SCALE: 1/2" = 1'-0"

DWG. NO. C0004400 16 DEC 87

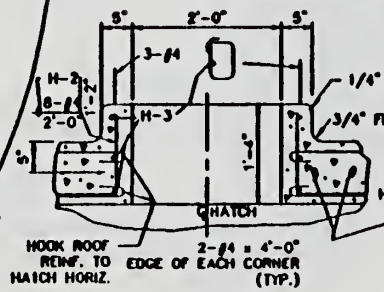
FOOTING DETAIL



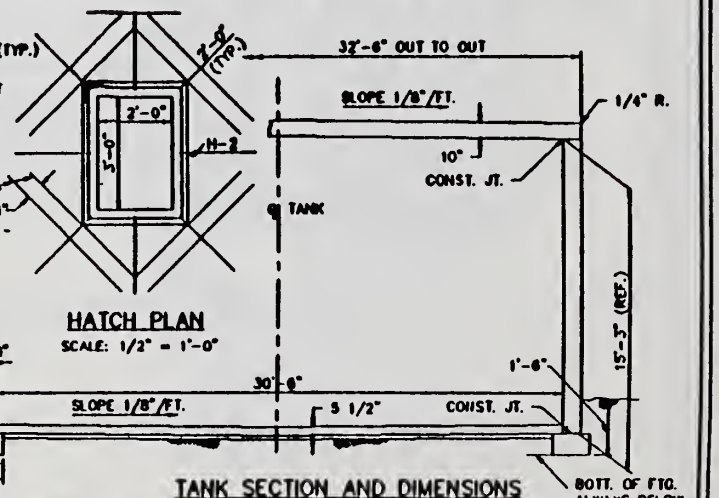
ROOF, WALL, SLAB REINFORCEMENT SECTION
SCALE: 1/2" = 1'-0"



WALL ELEVATION REINFORCEMENT
SCALE: 1/2" = 1'-0"



HATCH SECTION
SCALE: 1" = 1'-0"



HATCH PLAN
SCALE: 1/2" = 1'-0"

TANK SECTION AND DIMENSIONS
SCALE: 1/4" = 1'-0"

GENERAL NOTES:

SPECIFICATION:
DESIGN – UNIFORM BUILDING CODE 1976.

CONSTRUCTION – FOREST SERVICE BUILDINGS & FACILITIES CONSTRUCTION SPEC. AND SPECIAL PROVISIONS

LIVE LOAD: 150 PSF ROOF, 50 PSF WALL

UNIT STRESSES & MATERIALS:

CONCRETE – 7 BAGS/YD^3 – VIBRATED
f'_c = 3000 PSI, f_c = 1200 PSI, f_t = 300 PSI

REINFORCING STEEL – ASTM A615 GRADE 40
f_y = 40,000 PSI, f_s = 20,000 PSI, f_t = 14,000 (WALL) PSI

FOUNDATION BEARING MATERIAL: [illegible] OF CLAY
P = 150[illegible]

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION FIVE
THE PACIFIC SOUTHWEST REGION

RECOMMENDED	S/E W.L.	DATE 7-23-79	DRAWN	S/A P.	DATE 7-30-79
APPROVED	S/ENGR.	DATE 7-30-79	DESIGNED	S/A M.	DATE 7-79
			CHECKED	S/E W.L.	DATE 7-79
			REVIEWED	S/A A.	DATE 7-30-79

STANDARD WATER TANK
75,000 GAL. CAPACITY

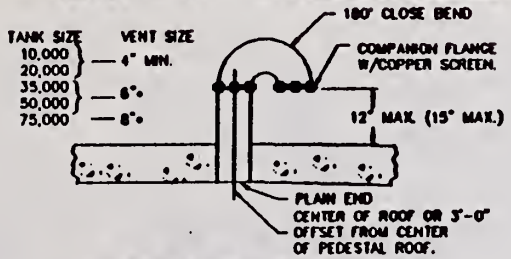
DIMENSIONS & R[illegible]

SHT 1 OF 3

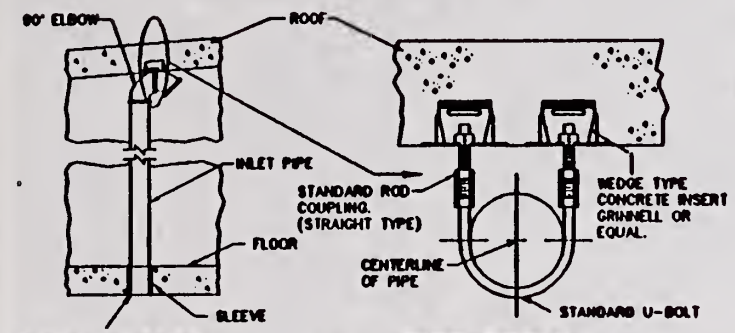
* OR SIZE BY MAX. EXPECTED INFLOW, OUTFLOW OR OVERFLOW.

FLANGED CAST IRON PIPE OR SCHED. 80 GALV. STEEL PIPE

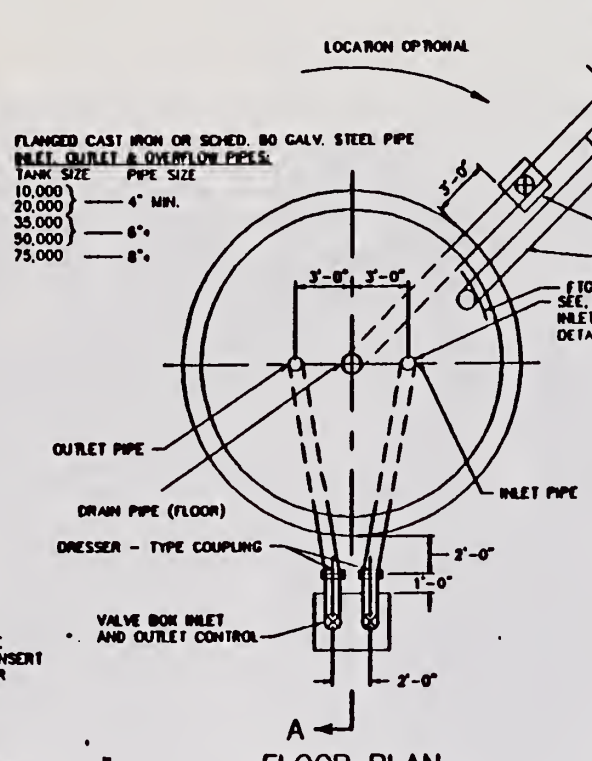
TANK SIZE	VENT SIZE
10,000 } 20,000	4" MIN.
35,000 } 50,000	6"*
75,000	8"*



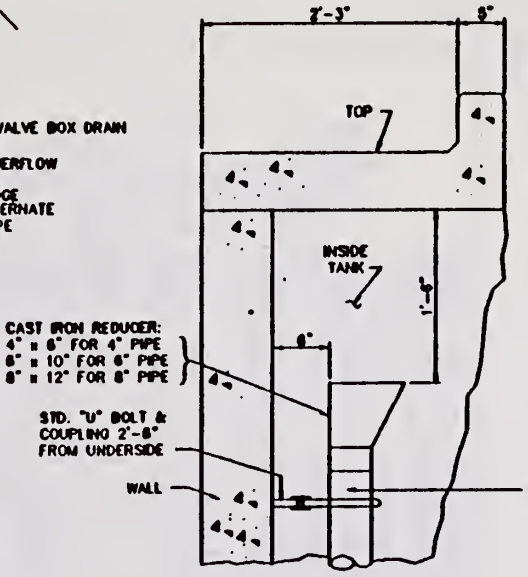
ROOF VENT DETAIL
NO SCALE



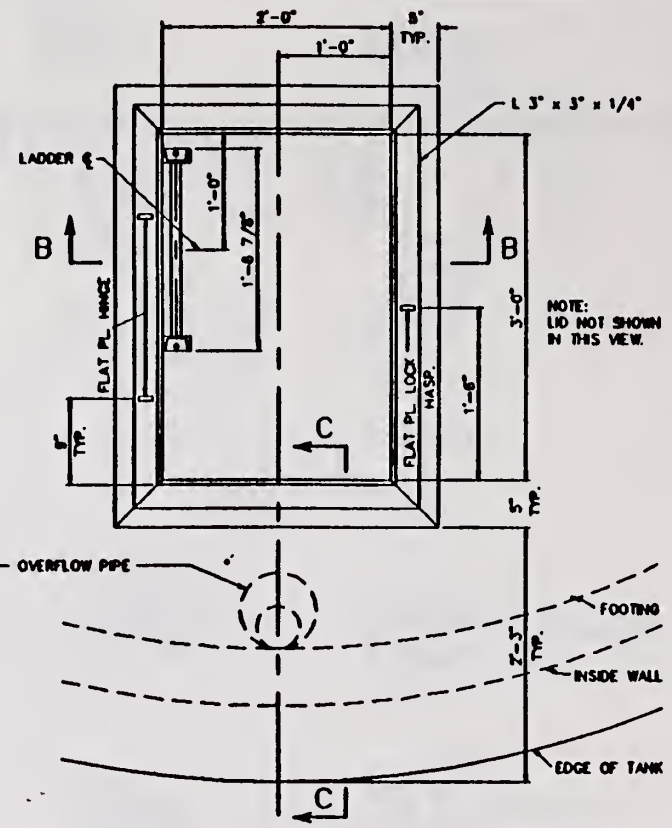
ALTERNATE INLET PIPE DETAIL
NO SCALE



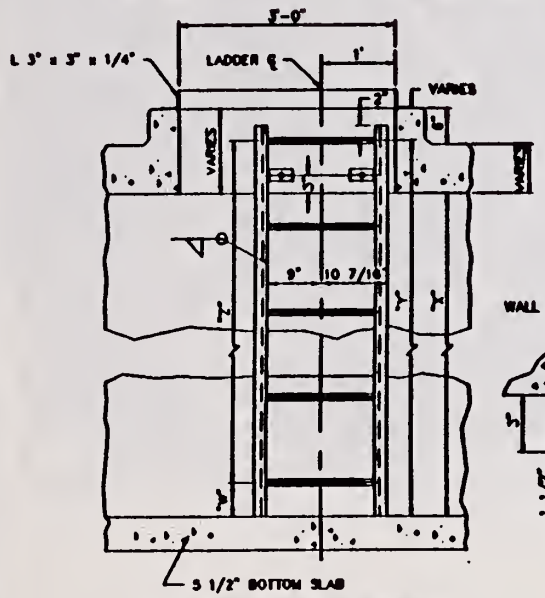
FLOOR PLAN
NO SCALE



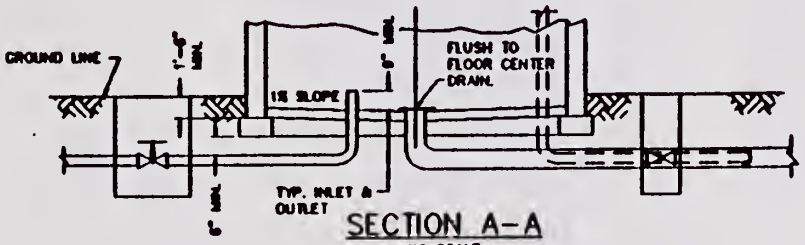
SECTION C-C
SCALE: 1 1/2"=1'-0"



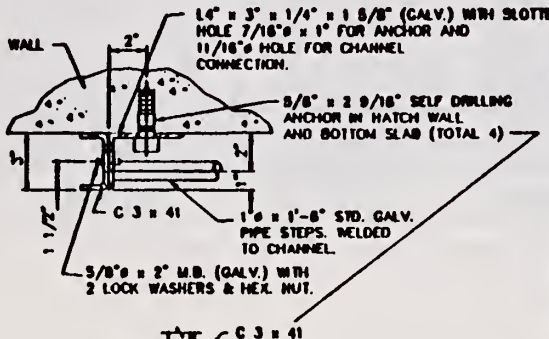
HATCH PLAN
SCALE: 1 1/2"=1'-0"



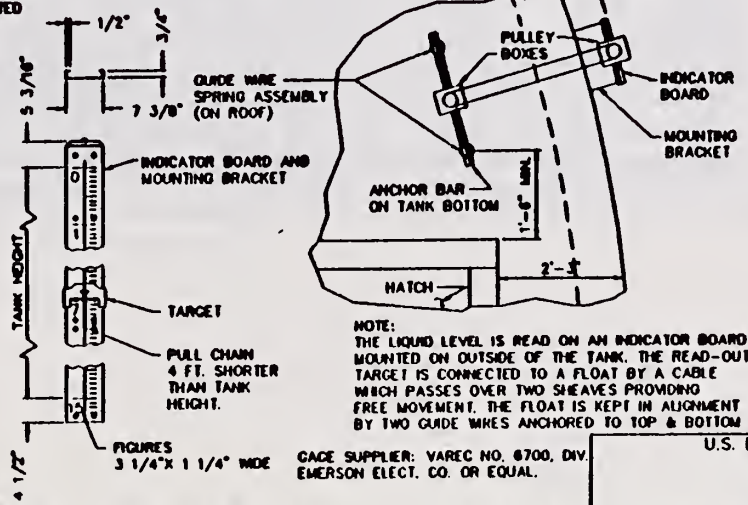
LADDER DETAIL
SCALE: 1"=1'-0"



SECTION A-A
NO SCALE



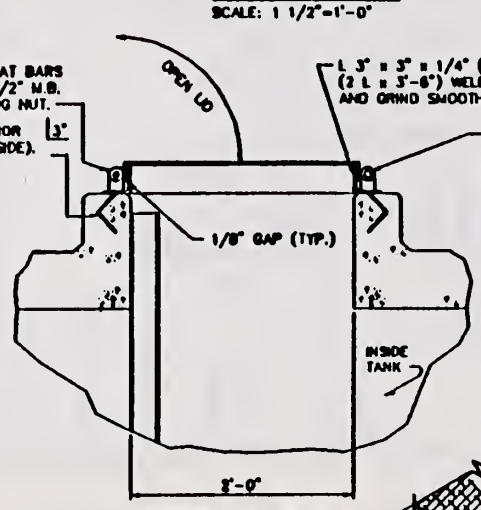
LADDER CONNECTION DETAIL
SCALE: 3"=1'-0"



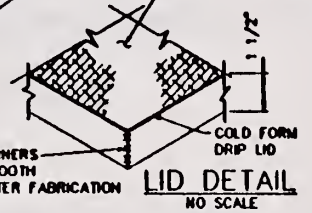
NOTE:
THE LIQUID LEVEL IS READ ON AN INDICATOR BOARD MOUNTED ON OUTSIDE OF THE TANK. THE READ-OUT TARGET IS CONNECTED TO A FLOAT BY A CABLE WHICH PASSES OVER TWO SHEAVES PROVIDING FREE MOVEMENT. THE FLOAT IS KEPT IN ALIGNMENT BY TWO GUIDE WIRES ANCHORED TO TOP & BOTTOM OF TANK.

GAGE SUPPLIER: VAREC NO. 6700, DIV. EMERSON ELECT. CO. OR EQUAL.

FLOAT TYPE LIQUID LEVEL GAGE DETAILS
NO SCALE



SECTION B-B
SCALE: 1 1/2"=1'-0"



LID DETAIL
NO SCALE

TANK SIZE	"X"	"Y"	"Z"	"W"
10,000 GAL.	8'-1 1/2"	8'-10"	8 STEPS AT 1'-2"	8"
20,000 GAL.	10'-0"	10'-10"	9 STEPS AT 1'-2"	1'-6"
35,000 GAL.	12'-0"	12'-10"	11 STEPS AT 1'-2"	1'-2"
50,000 GAL.	13'-6"	14'-6"	12 STEPS AT 1'-2"	1'-6"
75,000 GAL.	15'-3"	16'-1"	14 STEPS AT 1'-2"	11"

C0004500 08-01-88

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION FIVE AND SIX

STANDARD WATER TANK

ACCESSORIES FOR CONCRETE TANK

APPROVED S/LTE
RECOMMENDED S/E L.
DRAWN A.P. DATE 7/78
DESIGNED D.H. DATE 7/78
CHECKED W.L. DATE 7/78
REVIEWED T.A. DATE 7/78

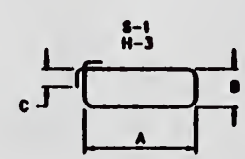
SHT 2
OF 3

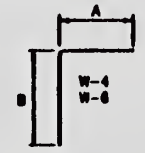
LOCATION	MARK	10,000 GAL. SIZE	NO.	A	B	C	LENGTH	Σ LT.	20,000 GAL. SIZE	NO.	A	B	C	LENGTH	Σ LT.	35,000 GAL. SIZE	NO.	A	B	C	LENGTH	Σ LT.
FOOTING: STIRRUPS	S-1	#3	38	1'-4"	0'-7 1/2"	0'-4"	4'-7"	165.0	#4	44	1'-5"	0'-7 1/2"	0'-4 1/2"	4'-10"	212.87	#4	52	1'-6"	0'-7 1/2"	0'-4 1/2"	5'-0"	260.0
FTG. OUTSIDE RING	F-1	#4	4	–	18'-2 1/4"	2'-0"	30'-8 7/8"	122.20	#5	4	–	22'-0"	3'-0"	37'-8 3/4"	150.25	#5	4	–	26'-2"	3'-0"	44'-1 1/4"	176.42
FTG. CENTER RING	F-2	#4	2	–	16'-11 1/2"	2'-0"	28'-7 5/8"	57.27	#5	2	–	20'-9"	3'-0"	35'-7 1/8"	71.18	#5	2	–	24'-10"	3'-0"	42'-0"	84.0
FTG. INSIDE RING	F-3	#4	4	–	15'-8 3/4"	2'-0"	26'-8 1/2"	106.83	#5	4	–	19'-8"	3'-0"	33'-7 9/16"	134.52	#5	4	–	23'-6"	3'-0"	39'-11"	159.87
FOOTING HOOKS	F-4	#4	81	0'-10 1/2"	1'-3"	–	2'-2 1/2"	108.25	#5	73	0'-11"	1'-6 3/4"	–	2'-5 3/4"	153.71	#5	84	1'-0 1/2"	1'-6 3/4"	–	2'-7 1/4"	167.82
WALL HORIZ. I.S. FACE	W-1	#4	18	–	16'-7"	3'-0"	29'-0 5/8"	464.83	#5	20	–	20'-4 1/2"	3'-0"	35'-0"	700.0	#5	24	–	24'-4 1/2"	3'-8"	41'-9 1/2"	1003.0
WALL HORIZ. O.S. FACE	W-2	#4	18	–	17'-3"	3'-0"	30'-1"	541.50	#5	22	–	21'-0 3/8"	3'-0"	36'-3 1/2"	798.41	#5	36	–	25'-4 3/8"	3'-8"	43'-4 1/8"	1560.37
WALL VERT. O.S.	W-3	#4	18	2'-8"	5'-0"	–	7'-8"	135.0	#5	30	3'-8"	5'-9"	–	9'-3"	277.50	#5	34	4'-8"	8'-9"	–	11'-3"	382.5
WALL VERT. O.S.	W-4	#4	18	2'-8"	8'-10 1/2"	–	11'-4 1/2"	204.75	#5	30	3'-8"	10'-10"	–	14'-4"	430.0	#5	34	4'-8"	12'-11"	–	17'-5"	592.17
WALL OUTSIDE	W-5	#4	20	4'-8"	5'-8"	–	9'-8"	190.0	#5	12	8'-0"	5'-9"	–	11'-9"	141.0	#5	12	7'-0"	8'-9"	–	13'-8"	165.0
WALL OUTSIDE	W-6	#4	20	4'-8"	8'-10 1/2"	–	13'-4 1/2"	267.50	#5	12	8'-0"	10'-10"	–	16'-10"	202.0	#5	12	7'-0"	12'-11"	–	19'-11"	239.0
WALL VERT. INSIDE	W-7	#4	25	8'-10 1/2"	–	–	8'-10 1/2"	221.87	#5	31	10'-10"	–	–	10'-10"	335.83	#5	36	12'-11"	–	–	12'-11"	480.83
ROOF TOP	R-1	#4	4	3'-8"	3'-1"	8'-8"	16'-8"	66.0	#5	4	3'-10"	4'-4"	7'-0"	17'-10"	71.33	#5	4	5'-7"	4'-3"	8'-8"	22'-7"	90.33
BOTTOM OF TOP SLAB	R-2	#4	4	3'-10 1/2"	1'-5 3/8"	8'-8"	16'-10 1/2"	67.50	#5	4	3'-11"	2'-1"	8'-1"	20'-1"	80.33	#5	4	5'-10"	2'-2"	8'-8"	25'-2"	100.67
BOTTOM OF TOP SLAB	R-3	#4	4	3'-5 1/2"	2'-8 7/8"	8'-8"	16'-5 1/2"	65.83	#5	4	3'-10"	3'-8"	8'-1"	20'-0"	80.0	#5	4	5'-3"	4'-2"	8'-8"	24'-7"	98.33
BOTTOM OF TOP SLAB	R-4	#4	4	2'-7 3/4"	4'-0 5/8"	8'-8"	15'-7 3/4"	62.58	#5	4	3'-9"	9'-1"	8'-1"	19'-11"	79.67	#5	4	4'-8"	8'-0"	8'-8"	24'-2"	96.33
BOTTOM OF TOP SLAB	R-5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
ROOF TOP SLAB	R-6	#4	1	–	17'-3 1/2"	2'-0"	58'-4"	58.33	#5	2	–	20'-10"	3'-0"	35'-8 3/4"	71.45	#5	2	–	25'-1"	3'-0"	42'-4 7/8"	84.80
ROOF TOP SLAB	R-7	#4	1	–	15'-7"	2'-0"	28'-5 3/4"	52.88	#5	2	–	19'-8"	3'-0"	33'-10 3/4"	67.78	#5	2	–	23'-7"	3'-0"	40'-0 1/2"	80.08
ROOF TOP SLAB	R-8	#4	1	–	14'-1"	2'-0"	48'-3"	48.25	#5	1	–	18'-0"	3'-0"	59'-6 5/8"	59.55	#5	2	–	22'-1"	3'-0"	37'-8 1/4"	75.38
ROOF TOP SLAB	R-9	#4	1	–	12'-1"	2'-0"	40'-0"	40.00	#5	1	–	16'-0"	3'-0"	53'-3"	53.25	#5	2	–	20'-1"	3'-0"	34'-6 5/8"	68.08
ROOF TOP SLAB	R-10	#4	1	–	10'-1"	2'-0"	33'-8"	33.67	#5	1	–	13'-6"	3'-0"	45'-5"	45.41	#5	1	–	17'-7"	3'-0"	58'-3"	58.25
ROOF TOP SLAB	R-11	#4	1	–	7'-1"	2'-0"	24'-3"	24.25	#5	1	–	11'-0"	3'-0"	37'-6 3/4"	37.58	#5	1	–	15'-1"	3'-0"	50'-4 5/8"	50.38
ROOF TOP SLAB	R-12	#4	1	–	4'-1"	2'-0"	14'-10"	14.83	#5	1	–	8'-0"	3'-0"	28'-1 5/8"	28.13	#5	1	–	12'-7"	3'-0"	42'-6 3/8"	42.53
ROOF TOP SLAB	R-13	–	–	–	–	–	–	–	#5	1	–	4'-0"	3'-0"	15'-6 7/8"	15.57	#5	1	–	8'-7"	3'-0"	29'-11 1/2"	29.98
ROOF TOP SLAB	R-14	–	–	–	–	–	–	–	–	–	–	–	–	–	–	#5	1	–	4'-7"	3'-0"	17'-4 3/4"	17.39
ROOF TOP SLAB	R-15	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
ROOF TOP SLAB	R-16	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
BOTTOM OF TOP SLAB	R-17	#4	1	–	1'-0"	2'-0"	5'-1 5/8"	5.14	#5	1	–	1'-0"	3'-0"	8'-10 5/8"	8.14	#5	1	–	1'-0"	3'-0"	8'-1 5/8"	8.14
BOTTOM OF TOP SLAB	R-18	#4	1	–	2'-8"	2'-0"	8'-10"	8.83	#5	1	–	2'-8"	3'-0"	10'-10 1/4"	10.85	#5	1	–	2'-8"	3'-0"	10'-10 1/4"	10.85
BOTTOM OF TOP SLAB	R-19	#4	1	–	4'-0"	2'-0"	14'-8 3/4"	14.58	#5	1	–	4'-0"	3'-0"	15'-6 3/4"	15.56	#5	1	–	4'-0"	3'-0"	15'-6 3/4"	15.58
BOTTOM OF TOP SLAB	R-20	#4	1	–	5'-8"	2'-0"	18'-3"	18.27	#5	1	–	8'-0"	3'-0"	21'-10"	21.84	#5	1	–	5'-8"	3'-0"	20'-3"	20.25
BOTTOM OF TOP SLAB	R-21	#4	1	–	7'-0"	2'-0"	24'-0"	24.0	#5	1	–	8'-6"	3'-0"	28'-8 1/2"	28.70	#5	1	–	7'-8"	3'-0"	26'-6 3/4"	26.58
BOTTOM OF TOP SLAB	R-22	#4	1	–	8'-0"	2'-0"	30'-3"	30.27	#5	1	–	11'-0"	3'-0"	37'-6 5/8"	37.55	#5	1	–	9'-8"	3'-0"	32'-10"	32.84
BOTTOM OF TOP SLAB	R-23	#4	1	–	11'-0"	2'-0"	38'-6 5/8"	38.55	#5	1	–	13'-8"	3'-0"	45'-5"	45.41	#5	1	–	12'-0"	3'-0"	40'-8 1/2"	40.70
BOTTOM OF TOP SLAB	R-24	#4	1	–	13'-0"	2'-0"	44'-10"	44.84	#5	1	–	16'-6"	3'-0"	54'-10"	54.83	#5	1	–	14'-8"	3'-0"	48'-6 5/8"	48.65
BOTTOM OF TOP SLAB	R-25	#4	1	–	16'-0"	2'-0"	52'-3"	52.26	#5	2	–	19'-6"	3'-0"	33'-7 1/2"	67.26	#5	1	–	17'-8"	3'-0"	57'-11 7/8"	57.98
BOTTOM OF TOP SLAB	R-26	–	–	–	–	–	–	–	–	–	–	–	–	–	–	#5	2	–	20'-8"	3'-0"	35'-2 1/2"	70.40
BOTTOM OF TOP SLAB	R-27	–	–	–	–	–	–	–	–	–	–	–	–	–	–	#5	2	–	23'-8"	3'-0"	39'-11"	79.82
BOTTOM OF TOP SLAB	R-28	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
BOTTOM OF TOP SLAB	R-29	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
BOTTOM OF TOP SLAB	R-30	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
BOTTOM OF TOP SLAB	R-31	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
ROOF ● TOP	R-32	#4	2	17'-3"	–	–	17'-3"	34.50	#5	2	16'-2"	–	–	16'-2"	32.33	#5	2	21'-4"	–	–	21'-4"	42.67
ROOF ● BOTTOM	R-33	#4	2	17'-3"	–	–	17'-3"	34.50	#5	2	21'-2"	–	–	21'-2"	42.33	#5	2	25'-4"	–	–	25'-4"	50.67
ROOF TOP ● BOTTOM	R-34	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
ROOF TOP ● TOP	R-35	–	–	–	–	–	–	–	–	–	–	–	–	–	–	#5	8	8'-8"	–	–	8'-8"	68.0
HATCH	H-1	#4	8	4'-0"	–	–	4'-0"	32.0	#4	8	4'-0"	–	–	4'-0"	32.0	#5	8	4'-0"	–	–	4'-0"	32.0
HATCH	H-2	#4	8	2'-0"	0'-8"	–	2'-8"	22.0	#4	8	2'-0"	0'-10"	–	2'-10"	22.68	#4	8	2'-0"	0'-11"	–	2'-11"	23.33
HATCH	H-3	#4	3	2'-8"	3'-8"	0'-4 1/2"	12'-9"	38.25	#4	3	2'-8"	3'-8"	0'-4 1/2"	12'-8"	38.25	#4	3	2'-8"	2'-8"	0'-4 1/2"	12'-9"	38.25

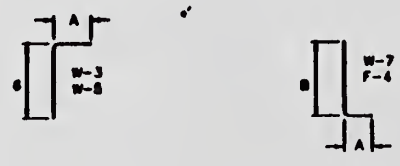
#3'S – 165.0 FT. x .376 = 62.04 LBS.
#4'S – 3346.38 FT. x .668 = 2,238.32 LBS.
W.W.M – 207.36 SQ. FT. x .58 = 120.28 LBS.
REINFORCING STEEL, TOTAL WEIGHT 2,417.64 LBS.
CONCRETE 23.0 CU. YDS.
STRUCTURAL STEEL WEIGHT 236.0 LBS.

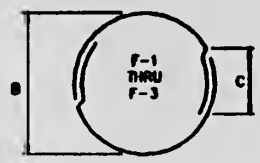
#4'S – 306.58 FT. x .668 = 204.13 LBS.
#5'S – 4452.23 FT. x 1.043 = 4,643.67 LBS.
W.W.M. – 314.18 SQ. FT. x .58 = 182.21 LBS.
REINFORCING STEEL, TOTAL WEIGHT 5,030.0 LBS.
CONCRETE 36.0 CU. YDS.
STRUCTURAL STEEL WEIGHT 255 LBS.

#4'S – 321.58 FT. x .668 = 214.82 LBS.
#5'S – 6512.40 FT. x 1.043 = 6792.43 LBS.
W.W.M. – 452.38 SQ. FT. x .58 = 262.38 LBS.
REINFORCING STEEL, TOTAL WEIGHT 7,269.63 LBS.
CONCRETE 58.0 CU YDS.
STRUCTURAL STEEL WEIGHT 276.0 LBS.

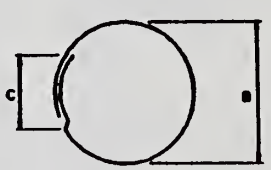








W-1 & W-2
R-6 THRU R-9
(R-10)
(R-25)
(R-26)
R-27 THRU R-31



R-10 THRU R-26
(R-6 THRU R-11)

( ) RE-BAR LENGTH OVER 60 FT. 2-SPLICES

C0004800
12/87

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION FIVE
THE PACIFIC SOUTHWEST REGION

RECOMMENDED [illegible] DATE 1-8-79
APPROVED [illegible] DATE 1-8-79
DRAWN [illegible] DATE 1-8-79
DESIGNED [illegible] DATE 1-8-79
CHECKED [illegible] DATE 1-8-79
REVIEWED DATE

STANDARD WATER TANKS
10,20,35 M GAL. QUANTITIES

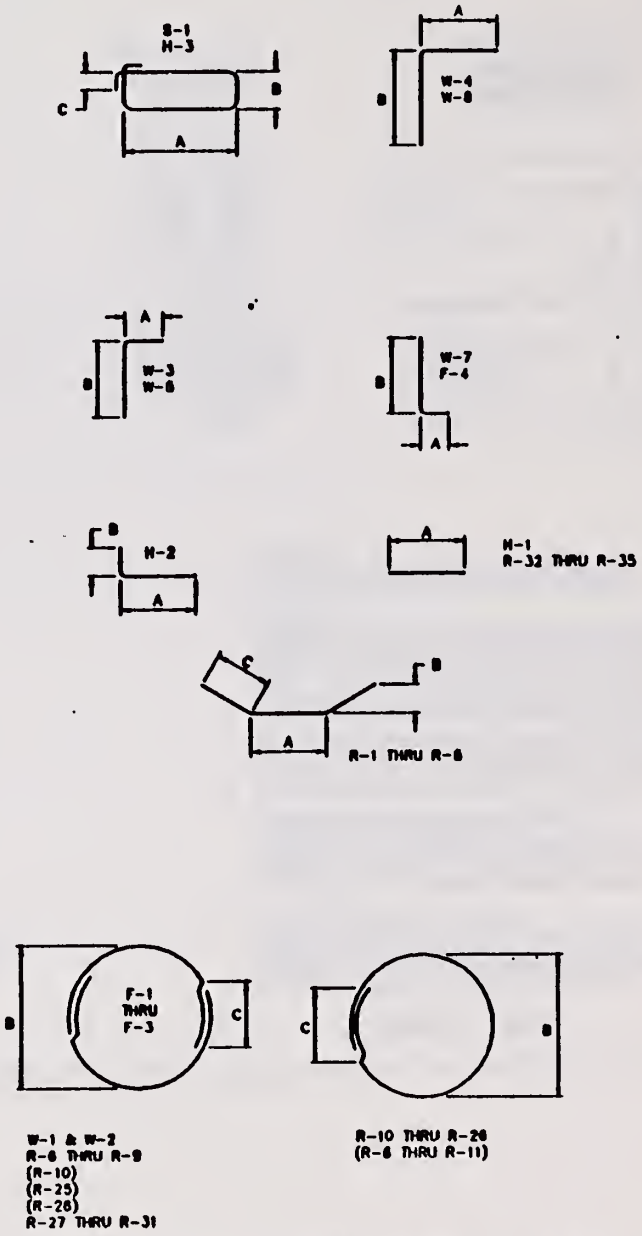
REINFORCEMENT [illegible] STEEL,
CONCRETE (1[illegible]

SHT 3
OF 3

LOCATION	MARK	50,000 GAL. SIZE	NO.	A	B	C	LENGTH	Σ LT.	75,000 GAL. SIZE	NO.	A	B	C	LENGTH	Σ LT.
FOOTING: STIRRUPS	S-1	#4	59	1'-7"	0'-9 1/2"	0'-4 1/2"	5'-6"	324.5'	#4	68	1'-8"	0'-9 1/2"	0'-4 1/2"	5'-6"	374.0'
FTG. OUTSIDE RING	F-1	#5	4	-	29'-5"	3'-0"	49'-2 1/2"	196.83'	#6	4	-	33'-1"	3'-0"	54'-11 5/8"	219.87'
FTG. CENTER RING	F-2	#5	2	-	27'-11"	3'-0"	46'-10 1/4"	93.71'	#6	2	-	31'-6"	3'-0"	52'-9 3/4"	104.96'
FTG. INSIDE RING	F-3	#5	4	-	26'-5"	3'-0"	44'-6"	178.0'	#6	4	-	30'-0 1/2"	3'-0"	50'-2 1/2"	200.78'
FOOTING HOOKS	F-4	#6	94	1'-1 1/2"	1'-10 1/2"	-	3'-0"	282.0'	#8	110	1'-2 1/8"	2'-2 1/4"	-	3'-4 3/8"	370.10'
WALL HORIZ. I.S. FACE	W-1	#6	26	-	27'-3"	3'-0"	46'-0 3/4"	1197.71'	#8	30	-	30'-11"	3'-0"	51'-8 3/4"	1548.87'
WALL HORIZ. O.S. FACE	W-2	#6	28	-	28'-5"	3'-0"	47'-9"	1337.0'	#8	32	-	32'-1"	3'-0"	53'-4 3/4"	1708.87'
WALL VERT. O.S.	W-3	#6	28	5'-0"	7'-6"	-	12'-6"	350.0'	#7	28	5'-0"	6'-0"	-	13'-0"	364.0'
WALL VERT. O.S.	W-4	#6	52	5'-0"	14'-5 1/2"	-	19'-5 1/2"	1011.83'	#7	60	5'-0"	16'-3 1/2"	-	21'-3 1/2"	1277.5'
WALL OUTSIDE	W-5	#6	24	8'-0"	7'-6"	-	15'-6"	372.0'	#7	32	9'-0"	8'-0"	-	17'-0"	544.0'
WALL OUTSIDE	W-6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WALL VERT. INSIDE	W-7	#6	42	14'-5 1/2"	-	-	14'-5 1/2"	607.25'	#8	50	16'-3 1/2"	-	-	16'-3 1/2"	814.58'
ROOF TOP	R-1	#6	4	5'-10"	4'-5"	0'-9"	25'-4"	101.33'	#6	4	5'-10"	4'-10"	12'-0"	29'-10"	119.33'
BOTTOM OF TOP SLAB	R-2	#6	4	5'-11"	1'-9"	11'-3"	28'-5"	113.87'	#6	4	5'-9"	2'-3"	13'-0"	31'-9"	127.0'
BOTTOM OF TOP SLAB	R-3	#6	4	5'-0"	5'-9"	11'-3"	27'-9"	110.0'	#6	4	5'-8"	4'-5"	13'-0"	31'-6"	126.0'
BOTTOM OF TOP SLAB	R-4	#6	4	4'-2 1/2"	7'-0"	11'-3"	26'-8 1/2"	106.83'	#6	4	5'-2"	6'-6"	13'-0"	31'-2"	124.87'
BOTTOM OF TOP SLAB	R-5	-	-	-	-	-	-	-	#6	4	4'-8"	8'-0"	13'-0"	30'-8"	122.0'
ROOF TOP SLAB ○ & ○	R-6	#6	2	-	28'-0"	3'-0"	46'-11 3/4"	93.96'	#6	2	-	32'-0"	3'-0"	53'-3 1/8"	106.33'
ROOF TOP SLAB ○ & ○	R-7	#6	2	-	26'-8"	3'-0"	44'-7 1/2"	89.25'	#6	2	-	30'-8"	3'-0"	50'-10 7/8"	101.81'
ROOF TOP SLAB ○ & ○	R-8	#6	2	-	25'-0"	3'-0"	42'-3 1/4"	84.54'	#6	2	-	29'-8"	3'-0"	48'-8 5/8"	97.10'
ROOF TOP SLAB ○ & ○	R-9	#6	2	-	23'-0"	3'-0"	39'-1 1/2"	78.26'	#6	2	-	27'-0"	3'-0"	45'-5"	90.82'
ROOF TOP SLAB ○ & ○	R-10	#6	2	-	20'-8"	3'-0"	35'-2 1/2"	70.40'	#6	2	-	24'-8"	3'-0"	41'-5 7/8"	82.97'
ROOF TOP SLAB ○ & ○	R-11	#6	1	-	18'-0"	3'-0"	59'-8 5/8"	59.55'	#6	2	-	22'-0"	3'-0"	37'-8 5/8"	75.10'
ROOF TOP SLAB	R-12	#6	1	-	15'-0"	3'-0"	50'-1 1/2"	50.12'	#6	2	-	19'-0"	3'-0"	32'-10 1/8"	65.67'
ROOF TOP SLAB	R-13	#6	1	-	12'-0"	3'-0"	40'-8 3/8"	40.70'	#6	1	-	18'-0"	3'-0"	53'-3 1/8"	53.26'
ROOF TOP SLAB	R-14	#6	1	-	8'-0"	3'-0"	28'-1 5/8"	28.13'	#6	1	-	12'-0"	3'-0"	40'-8 3/8"	40.70'
ROOF TOP SLAB	R-15	#6	1	-	4'-0"	3'-0"	15'-8 7/8"	15.57'	#6	1	-	8'-0"	3'-0"	28'-1 5/8"	28.13'
ROOF TOP SLAB	R-16	-	-	-	-	-	-	-	#6	1	-	4'-0"	3'-0"	15'-8 7/8"	15.57'
BOTTOM OF TOP SLAB	R-17	#6	1	-	1'-0"	3'-0"	6'-1 3/4"	6.14'	#6	1	-	1'-0"	3'-0"	6'-1 3/4"	6.14'
BOTTOM OF TOP SLAB	R-18	#6	1	-	2'-0"	3'-0"	9'-3 3/8"	9.28'	#6	1	-	2'-0"	3'-0"	9'-3 3/8"	9.28'
BOTTOM OF TOP SLAB	R-19	#6	1	-	3'-8"	3'-0"	13'-11 7/8"	13.99'	#6	1	-	3'-0"	3'-0"	12'-3 1/8"	12.42'
BOTTOM OF TOP SLAB	R-20	#6	1	-	5'-0"	3'-0"	18'-8 1/2"	18.70'	#6	1	-	4'-8"	3'-0"	17'-1 3/4"	17.14'
BOTTOM OF TOP SLAB	R-21	#6	1	-	6'-8"	3'-0"	23'-3 1/8"	23.42'	#6	1	-	6'-0"	3'-0"	21'-10 1/8"	21.84'
BOTTOM OF TOP SLAB	R-22	#6	1	-	8'-8"	3'-0"	28'-8 1/2"	28.70'	#6	1	-	8'-0"	3'-0"	26'-1 5/8"	28.13'
BOTTOM OF TOP SLAB	R-23	#6	1	-	10'-8"	3'-0"	33'-11 7/8"	33.99'	#6	1	-	10'-0"	3'-0"	34'-5"	34.41'
BOTTOM OF TOP SLAB	R-24	#6	1	-	12'-8"	3'-0"	42'-3 1/2"	42.29'	#6	1	-	12'-0"	3'-0"	40'-8 3/8"	40.72'
BOTTOM OF TOP SLAB ○ & ○	R-25	#6	1	-	15'-0"	3'-0"	50'-1 1/2"	50.12'	#6	1	-	14'-0"	3'-0"	48'-11 7/8"	48.99'
BOTTOM OF TOP SLAB ○ & ○	R-26	#6	1	-	17'-8"	3'-0"	57'-11 7/8"	57.99'	#6	1	-	16'-8"	3'-0"	54'-10"	54.83'
BOTTOM OF TOP SLAB	R-27	#6	2	-	20'-8"	3'-0"	35'-2 1/2"	70.40'	#6	2	-	19'-0"	3'-0"	32'-10 1/8"	65.69'
BOTTOM OF TOP SLAB	R-28	#6	2	-	23'-8"	3'-0"	39'-11"	79.83'	#6	2	-	21'-8"	3'-0"	36'-9 1/4"	73.54'
BOTTOM OF TOP SLAB	R-29	#6	2	-	26'-8"	3'-0"	44'-7 5/8"	89.25'	#6	2	-	24'-0"	3'-0"	40'-8 1/2"	81.41'
BOTTOM OF TOP SLAB	R-30	-	-	-	-	-	-	-	#6	2	-	27'-0"	3'-0"	45'-5"	90.83'
BOTTOM OF TOP SLAB	R-31	-	-	-	-	-	-	-	#6	2	-	30'-0"	3'-0"	50'-1 1/2"	100.25'
ROOF ● TOP	R-32	#6	2	24'-8"	-	-	24'-8"	49.0'	#8	2	28'-2"	-	-	28'-2"	56.33'
ROOF ● BOTTOM	R-33	#6	2	28'-8"	-	-	28'-8"	57.0'	#8	2	32'-2"	-	-	32'-2"	64.33'
ROOF TOP ● BOTTOM	R-34	#6	8	11'-3"	-	-	11'-3"	90.0'	-	-	-	-	-	-	-
ROOF TOP ● TOP	R-35	#6	16	10'-0"	-	-	10'-0"	160.0'	#6	16	9'-8"	-	-	9'-8"	152.0'
HATCH	H-1	#6	8	4'-0"	-	-	4'-0"	32.0'	#6	8	4'-0"	-	-	4'-0"	32.0'
HATCH	H-2	#4	8	2'-0"	1'-0	-	3'-0"	24.0'	#4	8	2'-0"	1'-2"	-	3'-2"	25.33'
HATCH	H-3	#4	3	2'-8"	3'-8"	0'-4 1/2"	12'-9"	38.25'	#4	3	2'-8"	3'-8"	0'-4 1/2"	12'-9"	38.25'

#4'S - 306.50 FT. x .668 = 258.18 LBS.
#5'S - 468.54 FT. x 1.043 = 488.68 LBS.
#6'S - 7,115.19 FT. x 1.502 = 10,687.50 LBS.
W.W.M. - 572.55 SQ. FT. x .58 = 332.08 LBS.
REINFORCING STEEL, TOTAL WEIGHT 11,786.44 LBS.
CONCRETE 77.0 CU. YDS.
STRUCTURAL STEEL WEIGHT 291.0 LBS.

#4'S - 437.58 FT. x .668 = 292.30 LBS.
#6'S - 7330.75 FT. x 1.502 = 11,010.78 LBS.
#7'S - 2185.5 FT. x 2.044 = 4,467.18 LBS.
W.W.M. - 730.62 SQ. FT. x .58 = 423.75 LBS.
REINFORCING STEEL, TOTAL WEIGHT 16,194.0 LBS.
CONCRETE 103.0 CU. YDS.
STRUCTURAL STEEL WEIGHT 311.0 LBS.



( ) RE-BAR LENGTH OVER 60 FT. 2-SPLICES

C0004700
12/67

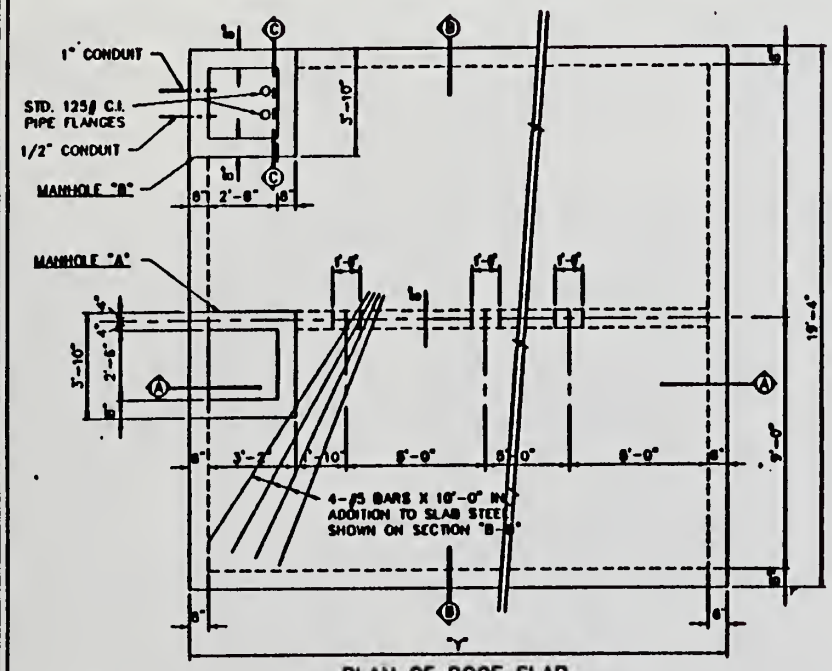
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION FIVE
THE PACIFIC SOUTHWEST REGION

RECOMMENDED [illegible] DATE 1-4-71
APPROVED [illegible] DATE 1-8-71
DRAWN [illegible] DATE 1-71
DESIGNED [illegible] DATE 1-71
CHECKED [illegible] DATE 1-71
REVISED DATE

STANDARD WATER TANKS
50,75 M GAL. QUANTITIES

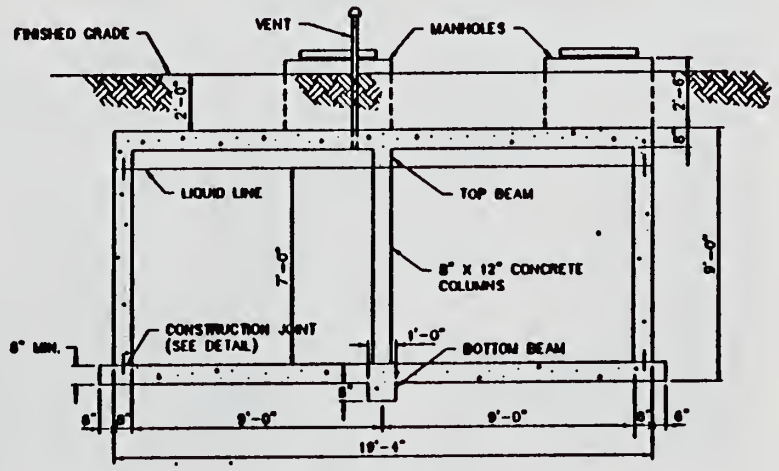
REINFORCEMENT, STRUCT. STEEL, CONCRETE

SHT 3 OF 3 (A)



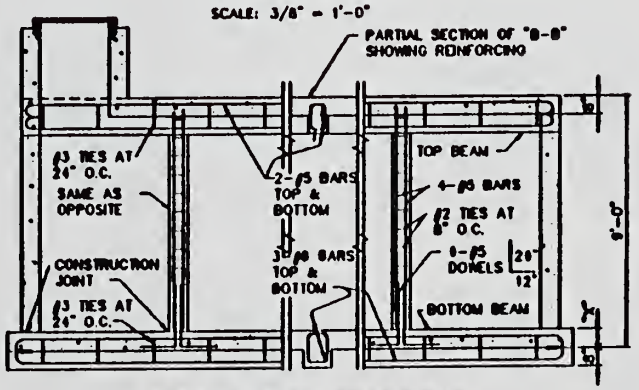
PLAN OF ROOF SLAB

SCALE: 3/8" = 1'-0"



SECTION "B-B"

SCALE: 3/8" = 1'-0"

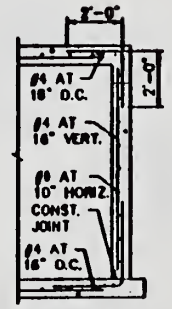


SECTION "A-A" REINFORCING OF BEAMS AND COLUMNS

SCALE: 3/8" = 1'-0"

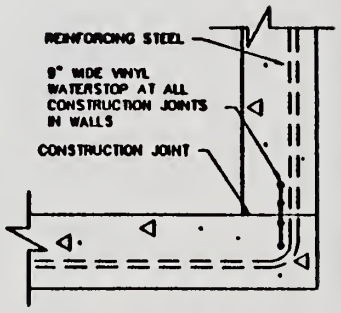
GENERAL NOTES

1. CONCRETE PROTECTION OVER STEEL REINFORCEMENT SHALL BE A MINIMUM OF 3" BETWEEN STEEL AND GROUND AT BOTTOMS OF FOOTING SLABS, 2" BETWEEN STEEL AND GROUND AT WALLS AND ROOF SLAB AND 1 1/2" BETWEEN STEEL AND INTERIOR TANK SURFACES.
2. ALL CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 3500 P.S.I. AT 28 DAYS AND SHALL CONTAIN A MAXIMUM OF 5 1/4 GALLONS OF WATER PER SACK OF CEMENT WITH A MAXIMUM SLUMP OF 3". ALL CONCRETE SHALL BE MECHANICALLY VIBRATED.
3. TO ALL CONCRETE SHALL BE ADDED AN APPROVED AIR ENTRAINMENT AGENT IN SUCH QUANTITIES AS TO PRODUCE FROM 3 TO 8 PERCENT ENTRAINED AIR. THE BRAND OF AIR ENTRAINING AGENT MUST BE APPROVED IN ADVANCE.
4. DURING COLD WEATHER WHEN THE AMBIENT TEMPERATURE WILL FALL BELOW 32°F. DURING A TWENTY FOUR HOUR PERIOD, AN ACCELERATOR-DENSIFYING AGENT SHALL BE ADDED. THIS ADMIXTURE SHALL BE "SIKACRETE" AS MANUFACTURED BY THE SIKA CHEMICAL CORP., PASSAIC, NEW JERSEY, AND SHALL BE IN AMOUNTS AS SPECIFIED BY THE ENGINEER.
5. IF SOLID ROCK IS ENCOUNTERED, PLACE 6" COARSE AGGREGATE CUSHION OVER ROCK BEFORE POURING BOTTOM SLAB.



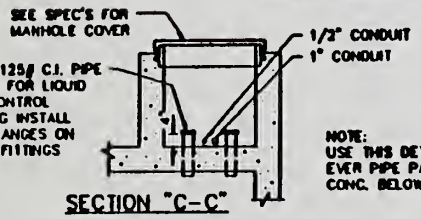
END WALL REINFORCING

SCALE 3/8" = 1'-0"



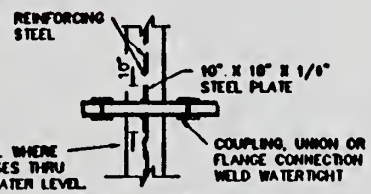
CONSTRUCTION JOINT DETAIL

SCALE: 1 1/2" = 1'-0"



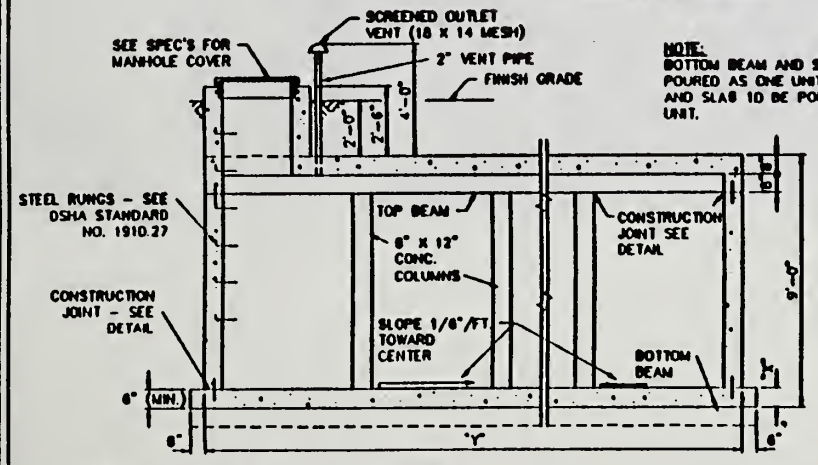
SECTION "C-C"

SCALE: 1/2" = 1'-0"



PIPE FLANGE WATER STOP DET.

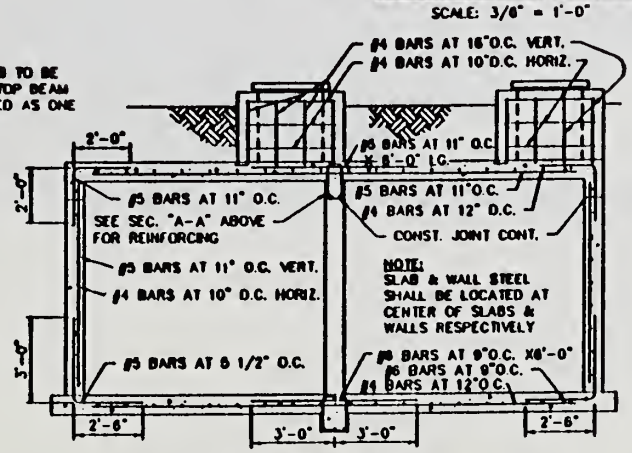
NO SCALE



NOTE: INLET AND OUTLET DETAILS WILL BE SHOWN ON ALTERNATE SHEET.

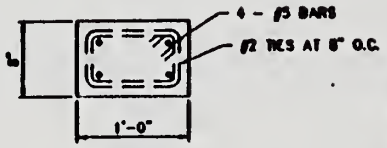
SECTION "A-A"

SCALE: 3/8" = 1'-0"



SECTION "B-B" SHOWING REINFORCING

SCALE: 3/8" = 1'-0"



CONC. COLUMN DETAIL

SCALE 1 1/2" = 1'-0"

TABLE OF CAPACITIES

LIQUID CAPACITY	"Y" DIMENSION	"X" DIMENSION
14,200 GAL.	16'-4"	0'-8 1/2"
19,000 GAL.	21'-4"	0'-9"
23,600 GAL.	26'-4"	0'-9 1/2"
28,400 GAL.	31'-4"	0'-9 1/2"
33,000 GAL.	36'-4"	0'-10"
37,800 GAL.	41'-4"	0'-10 1/2"

DWG. NO. C0004800 14 DEC 87

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION ONE
NORTHERN REGION

SUBMITTED [illegible] DATE 1/14/87
APPROVED [illegible] DATE 1/14/87

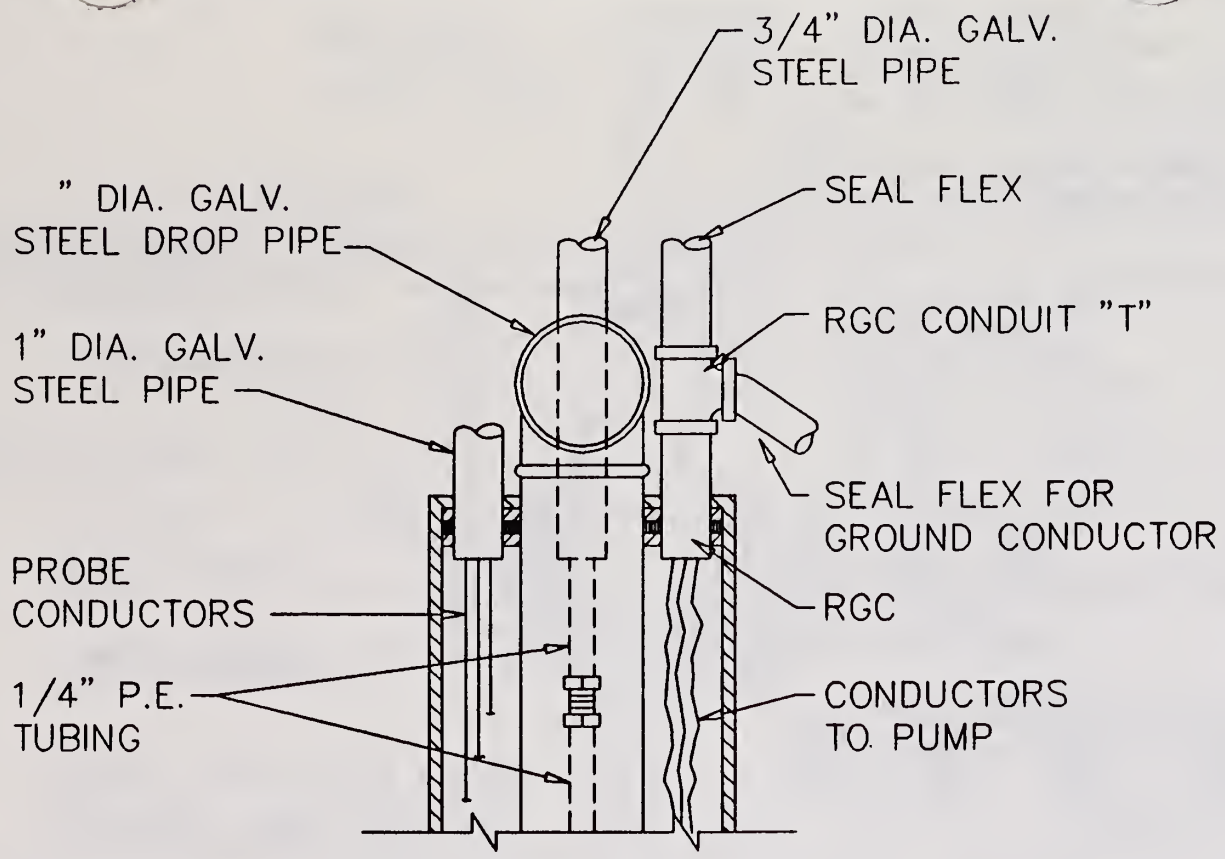
DRAWN [illegible] DATE 1/14/87
DESIGNED [illegible] DATE 1/14/87
CHECKED 1/14/87 DATE 1/14/87
REVISED DATE

WATER RESERVOIR

PLAN W-5701

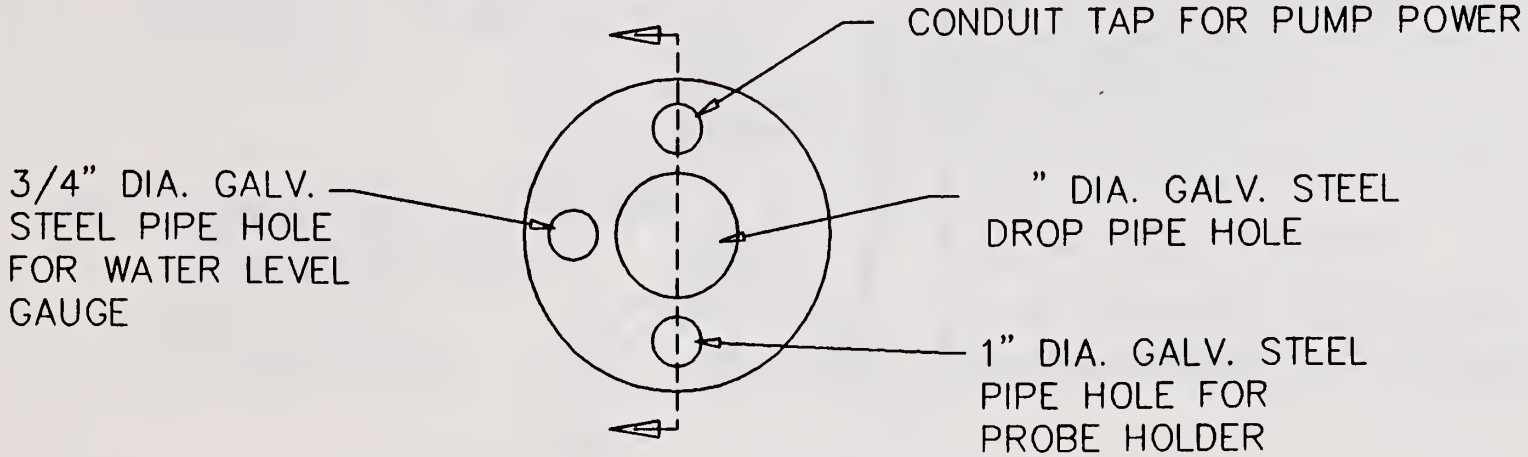
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SHT. 1
OF 1



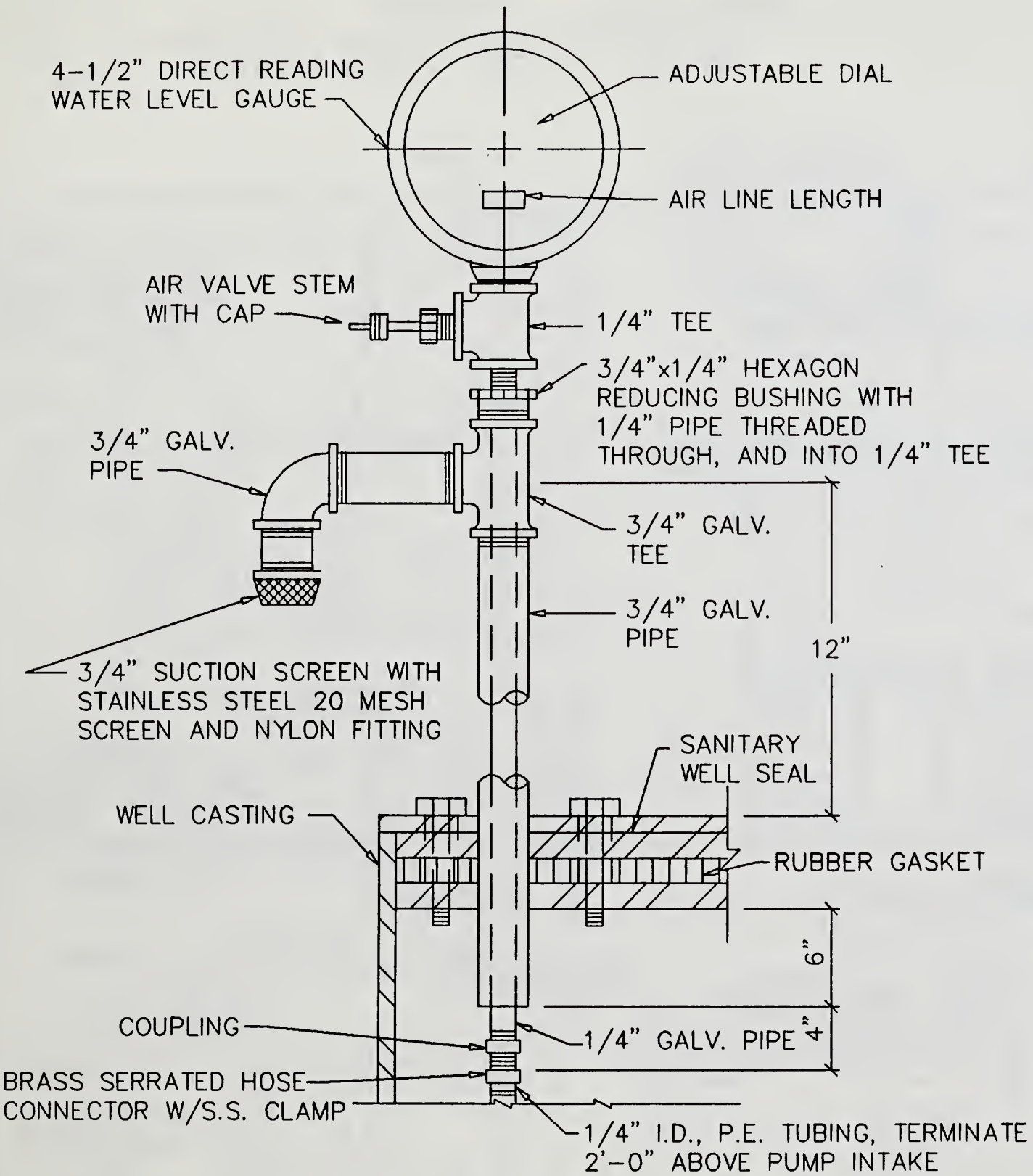
SECTION A-A

NO SCALE



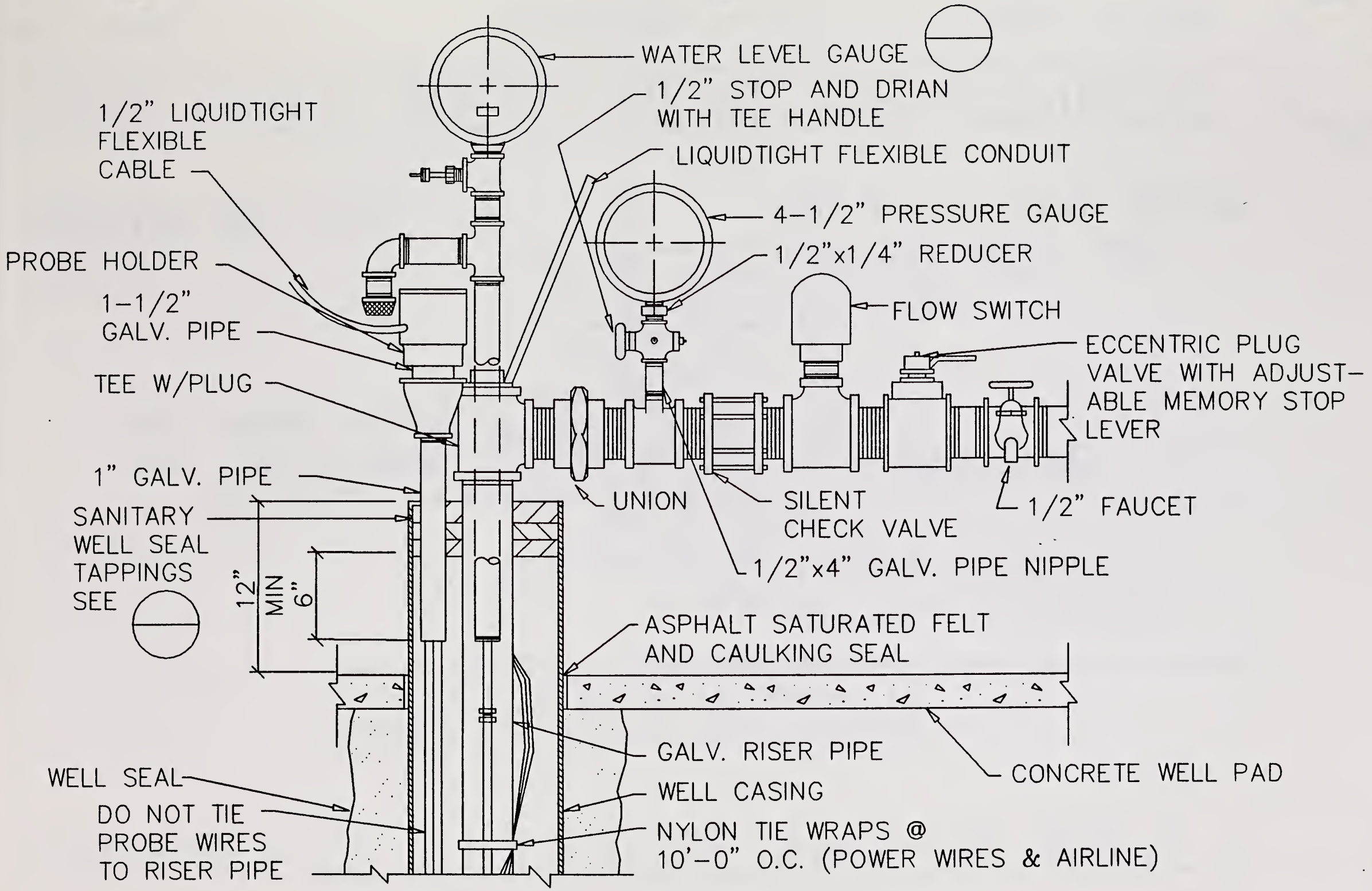
SANITARY WELL SEAL

3"=1'-0" CD000001 FEB. 14,1986



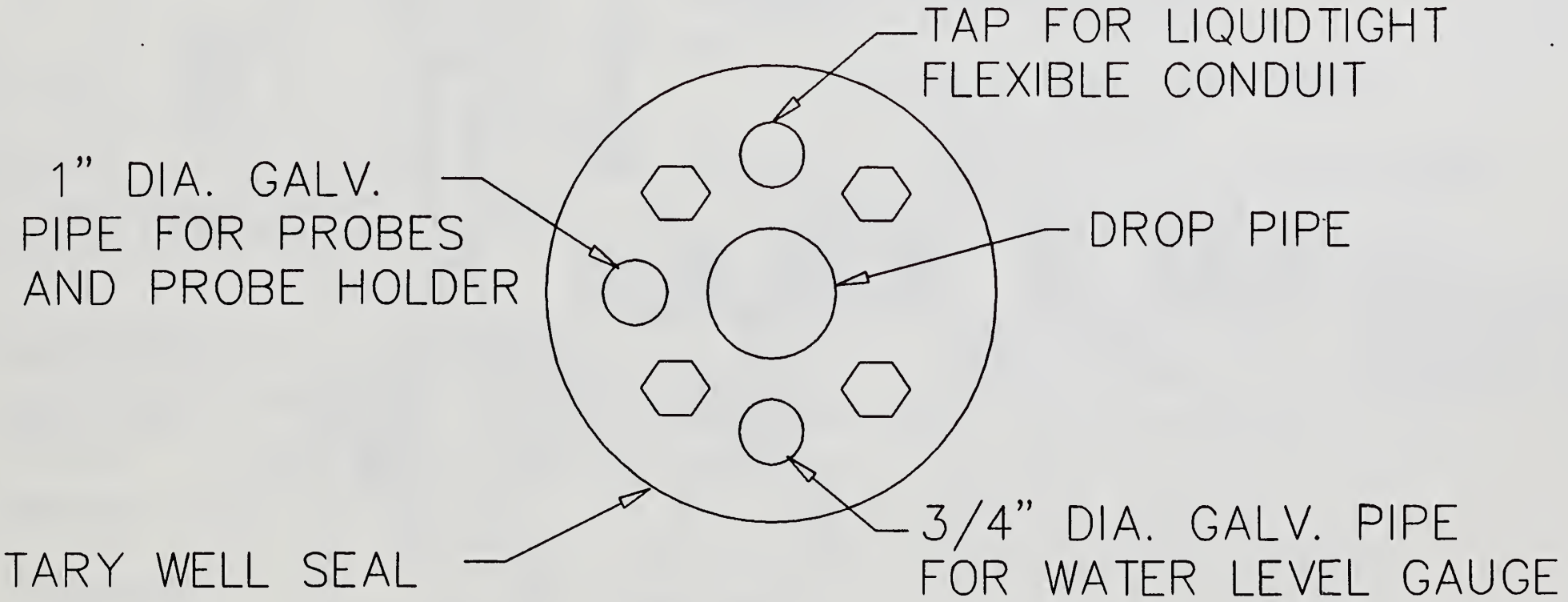
WATER LEVEL GAUGE

NO SCALE CD000003 FEB. 14,1986



WELL HEAD DETAIL

NO SCALE CD000004 FEB. 14,1986

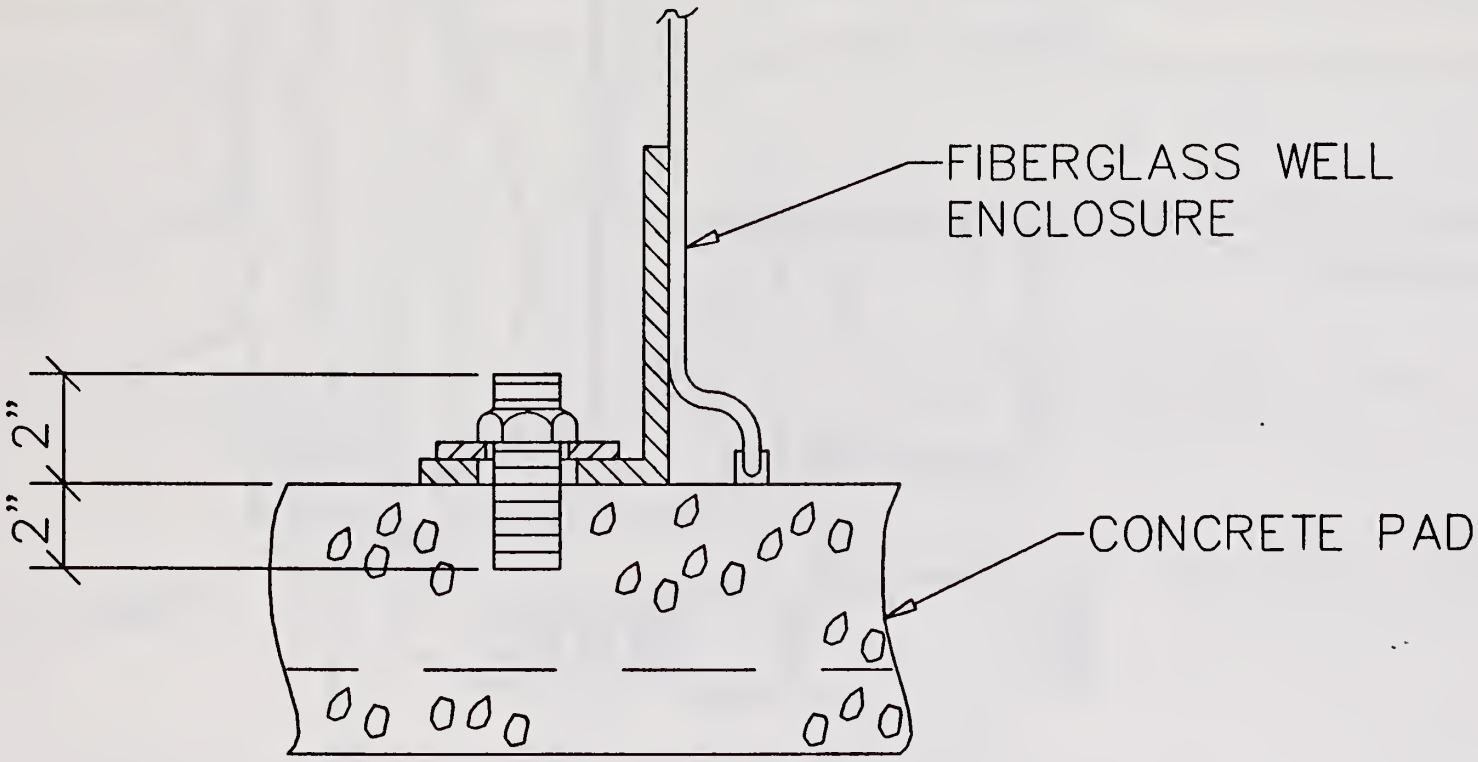


SANITARY WELL SEAL TRAPPINGS

NO SCALE

CD000005

FEB. 14,1986



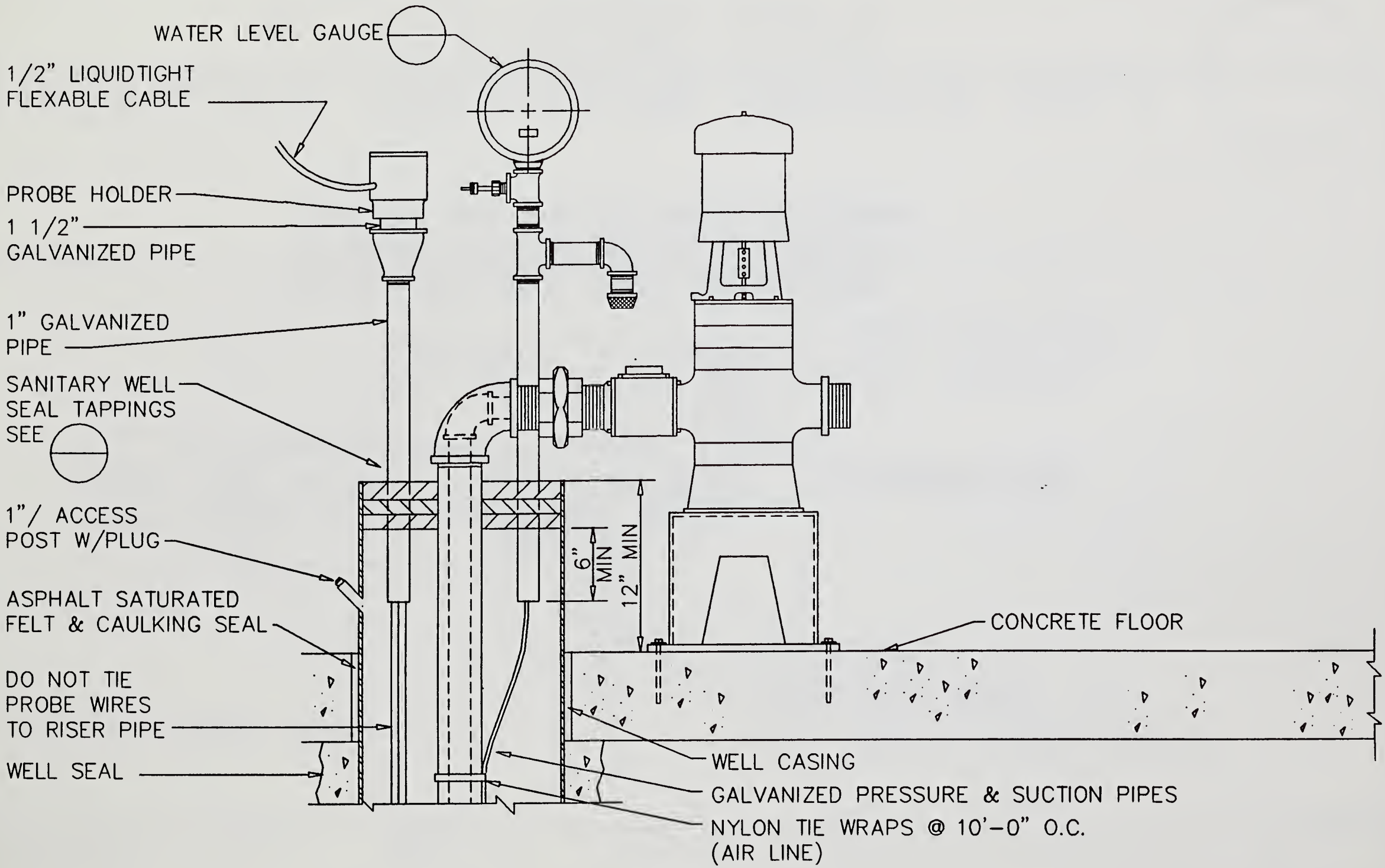
GALVANIZED STEEL CLIPS ARE MOLDED
TO INSIDE FACE OF THE ENCLOSURE TO
COINCIDE WITH ANCHOR BOLT LOCATIONS.

FIBERGLASS ENCLOSURE ANCHOR BOLT & HOLD DOWN CLIPS

NO SCALE

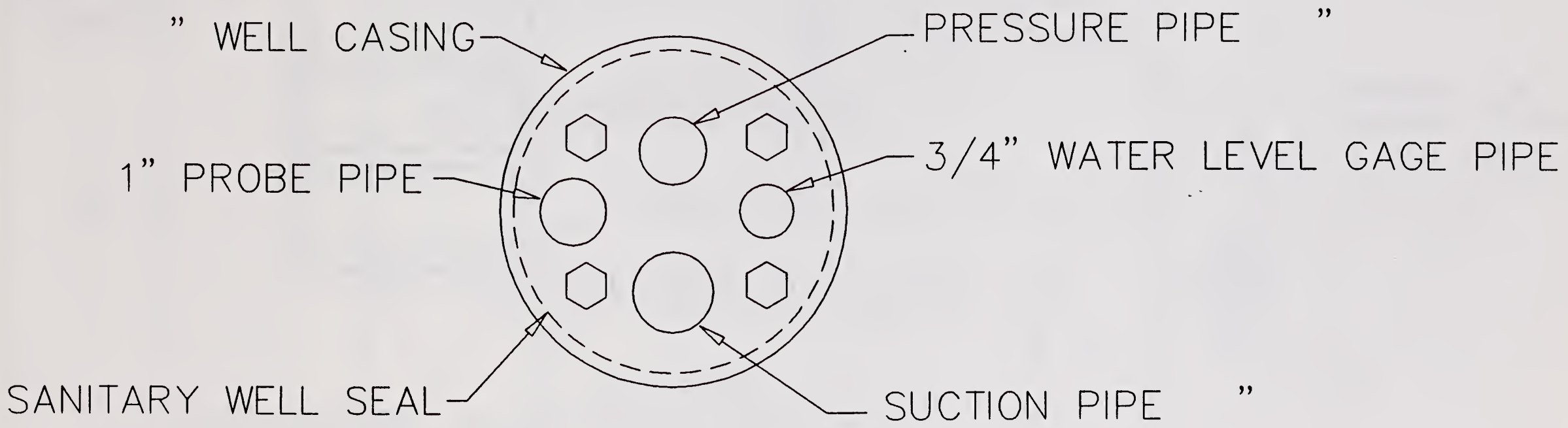
CD000052

FEB. 14,1986



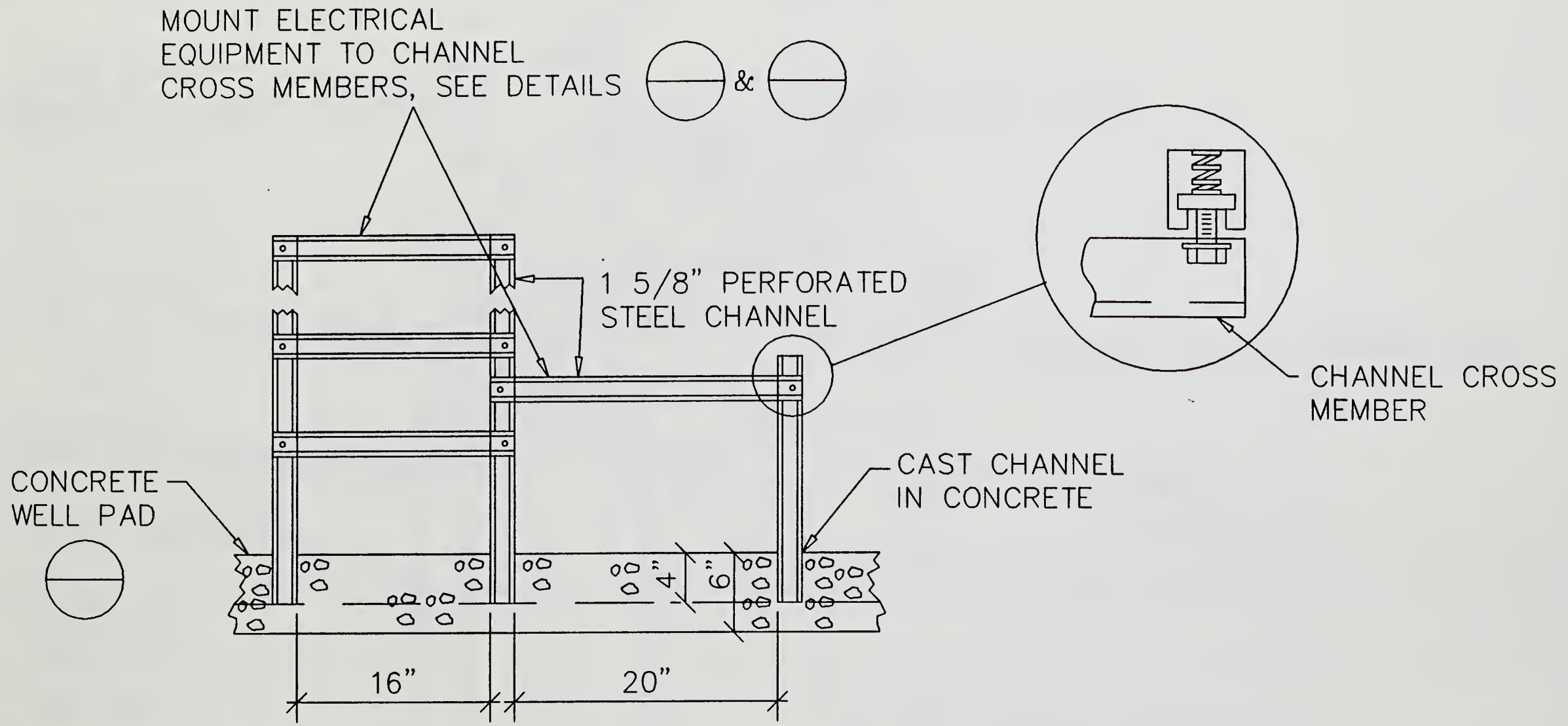
WELL HEAD DETAIL

NO SCALE CD000053 FEB. 14,1986



SANITARY WELL SEAL TAPPINGS

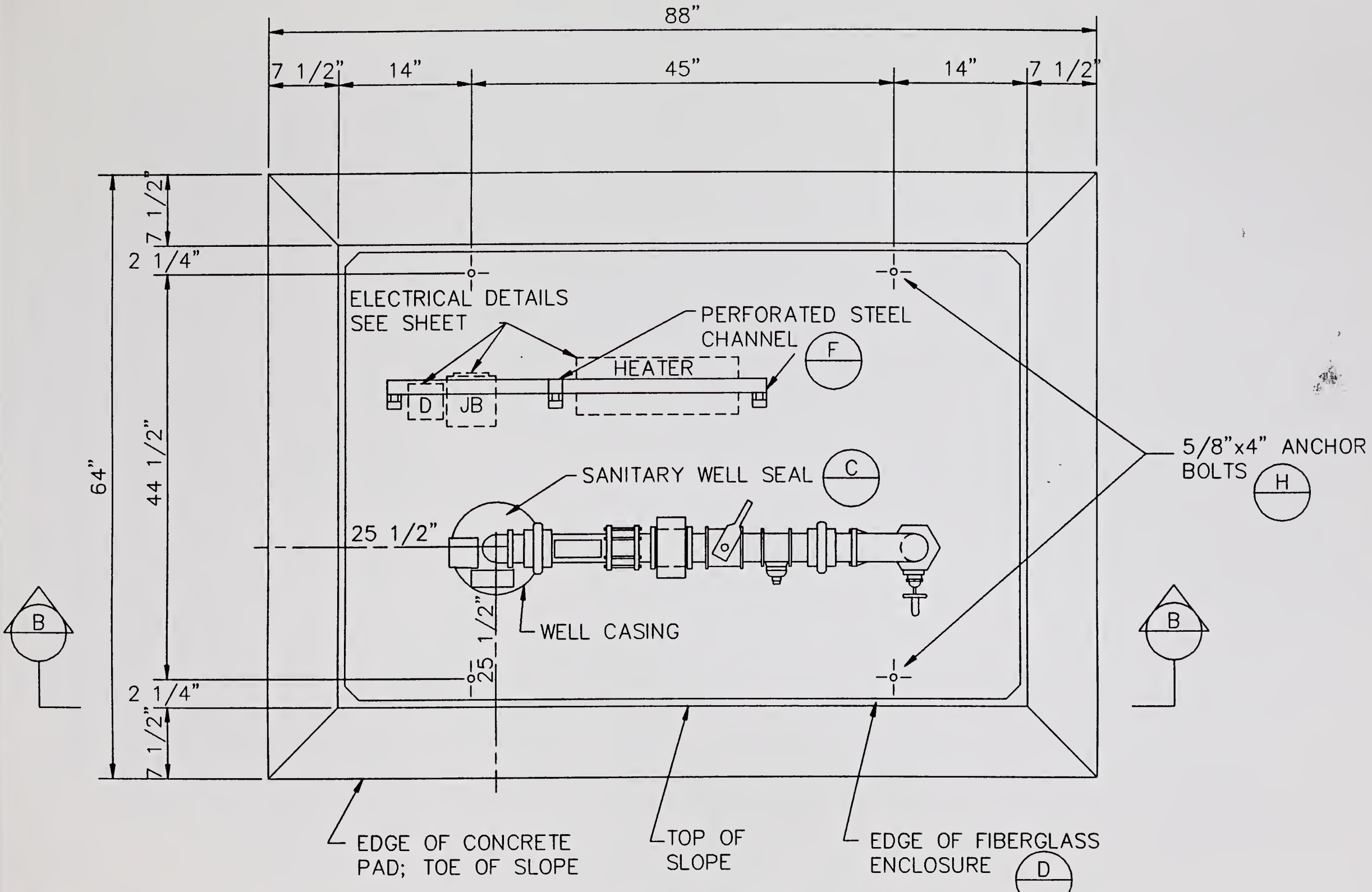
NO SCALE CD000054 FEB. 14,1986



ELECTRICAL MOUNTING CHANNEL DETAIL

NO SCALE

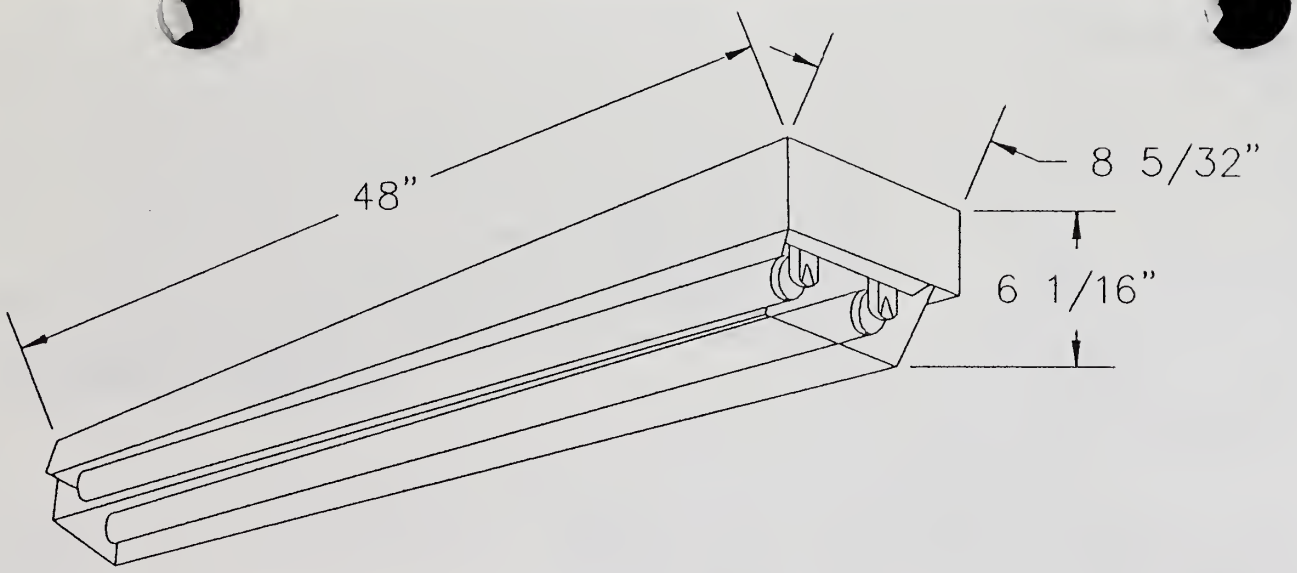
CD000055



WELL ENCLOSURE PAD (A)

NO SCALE

CD000154 APRIL 7, 1988



COEFFICIENTS OF UTILIZATION
ZONAL CAVITY METHOD

pFC	20			20			20		
pCC	80			50			10		
pW	50	30	10	50	30	10	50	30	10
ROOM CAVITY RATIO 1	64	64	62	62	60	58	56	55	54
2	59	55	52	55	53	48	50	48	46
3	52	47	44	49	46	41	45	41	40
4	46	41	37	44	41	35	40	36	34
5	41	36	31	39	36	30	36	32	30
6	37	31	27	35	31	26	32	28	26
7	33	27	23	31	27	22	28	25	22
8	29	24	20	28	24	19	26	22	19
9	50	21	17	25	21	17	23	19	16
10	24	19	15	22	18	15	21	17	14

LUMINENCE IN FOOTLAMBERTS:

ANGLES MEASURED FROM NADIR(0°)

	NORMAL		PARALLEL	
ANGLE	AV	MAX	AV	MAX
45°	1455	2933	198	2378
55°	1483	2650	1094	2141
65°	1428	2768	922	1774
75°	1361	2792	669	1135
85°	1207	2744	416	469

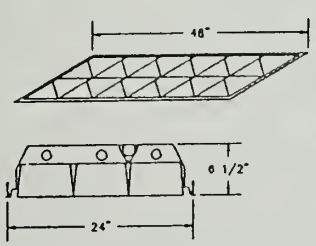
THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

F-6

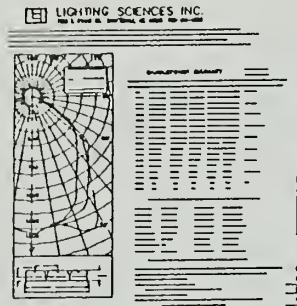
2-TUBE VAPORTIGHT LUMINAIRE

THE LUMINAIRE SHALL BE COMMERCIAL TYPE WITH 20-GAGE DIE-FORMED STEEL HOUSING APPROVED BY U.L. FOR SURFACE MOUNTING. ALL METAL PARTS BONDERIZED AGAINST CORROSION AND FINISHED IN WHITE BAKED ENAMEL. FIXTURE SHALL BE VAPORTIGHT WITH GASKETED .125" ONE PIECE CLEAR ACRYLIC ENCLOSURE. THE COEFFICIENT OF UTILIZATION SHALLSS THAN .35 BASED ON A CEILING REFLECTANCE OF 50%, A WALL REFLECTANCE OF 30%, A FLOOR REFLECTANCE OF 20%, AND A ROOM CAVITY RATIO OF 5. EACH UNIT SHALL BE COMPLETELY WIRED AND EQUIPPED WITH ALL AUXILIARIES. BALLASTS SHALL BE HPF, ETL, 430MA WITH U.L. AND C.B.M. LABELS. COLD WEATHER BALAST, 0 DEGREES FAHERINHEIT ON SPECIAL ORDER AVAILABLE. FIXTURE TO BE KEENE/SPECLINE CAT. NO. SWC-240 OR APPROVED EQUAL. EQUIP WITH TWO F40T12WW LAMPS

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.



LIGHTING SCIENCES INC.



COEFFICIENTS OF UTILIZATION

2 TUBE PARABOLIC TYPE LUMINAIRE
APPROVED FOR SURFACE MOUNTING

THE LUMINAIRE SHALL BE COMMERCIAL TYPE WITH CODE GAUGE MUTIPLE-DIE FORMED COLD ROLLED STEEL HOUSING COVER PLATE FOR DUCT OPENING PROVIDED.

LOUVER ASSEMBLY TO BE PROVIDED WITH SELF-ALIGNIND SPRING LOADED TRIGGER LATCHES AND HEAVY GAUGE STEEL HINGES WHICH ALLOW HINGING FROM EITHER SIDE. PAINTED METAL PARTS ARE PRIMED WITH A COATING OF IRON PHOSPHATE. THE REGRESS AREA IS PAINTED, BAKED MATTE BLACK ENAMEL, LOUVERS ARE TO BE PRE-ANODIZED SEMI-SPECULAR ALUMINUM.

THE COEFFICIENT OF UTILIZATION SHALL NOT BE LESS THAN .38 BASED ON A CEILING REFLECTANCE OF 50 PERCENT, WALL REFLECTANCE OF 30 PERCENT, FLOOR REFLECTANCE OF 20 PERCENT, AND A ROOM CAVITY RATIO OF 5.

BALLAST SHALL BE ENERGY SAVING, HPF, ETL, 430MA WITH U.L. AND C.B.M. LABELS.
FIXTURE TO BE GLOBE CAT. NO ALP8242-4R-12 OR APPROVED EQUAL.

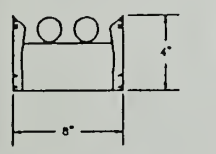
LAMPS	F-51	2-4 FOOT-F-40 T12 CW
BALLAST	10-25-88	RAPID START

RECESSED CEILING FIXTURE



FIXTURE SHALL BE CONSTRUCTED OF MINIMUM 20 GAUGE STEEL, BAKED WHITE ENAMEL HOUSING. ATTACHED PREWIRED J-BOX SHALL BE EQUIPPED WITH 1/2" INCH AND 3/4" INCH KNOCKOUTS. MINIMUM HOUSING DIMENSIONS SHALL BE 13 1/8" X 19 1/8" X 9 3/8" DEEP. MOUNTING SHALL BE EITHER BY PLASTER BRACKETS AND/OR HANGER BARS. FRAME SHALL BE STEEL WITH SATIN CHROME FINISH APPROXIMATELY 14 3/8" O.D. EYEBALL SHALL ADJUST 45° FROM VERTICAL POSITION WITH 360° ROTATION. FIXTURE SHALL BE SUITABLE FOR USE WITH 150 R/FL, R-40 MEDIUM BASE LAMP.

LAMP	I-20 10-25-88	1 - 150 R/FL, R-40



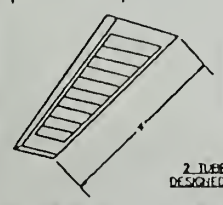
CAT. NO. PDOP1-43-421
TEST NO. 7724
DATE: 8/11/82
EFF. 87.5%
S/MH RATIO: 1.5

ZONAL SUMMARY

ZONE	LUMENS	LAMP	FIXT
0- 30	738	11.8	13.3
0- 40	1930	18.3	21.8
0- 60	2937	33.4	38.1
0- 90	3332	38.4	41.8
90-180	3071	61.1	66.4
0-180	5903	87.9	100.0

ZONAL CAVITY C.U. — FLOOR REFLECTANCE = 80%

RC	80				70				50				0
RCW	70	50	30	10	70	50	30	10	50	30	10	0	
1	85	84	78	76	77	76	73	70	64	63	60	58	53
2	78	73	67	63	71	69	63	59	54	54	52	49	39
3	73	65	58	54	66	60	54	50	46	46	44	42	32
4	68	57	51	46	61	53	47	43	40	40	38	37	27
5	60	51	44	39	55	47	41	38	35	35	33	32	23
6	56	45	39	34	50	42	36	33	31	31	29	27	19
7	51	41	34	30	46	37	32	29	28	28	26	24	16
8	47	38	30	26	43	34	28	26	26	25	24	21	13
9	43	33	26	23	39	30	25	23	23	23	21	19	11
10	40	30	23	18	37	27	22	18	20	20	19	16	8



2 TUBE PENDALUNE LUMINAIRE
DESIGNED FOR PENDANT MOUNTING

THE LUMINAIRE SHALL BE CONSTRUCTED OF HEAVY DUTEY ALUMINUM EXTRUSIONS WITH MINIMUM EXPOSED FASTENERS. BALLAST HOUSING TO INTERLOCK WITH BODY CHANNELS AND INCORPORATES CONCEALED RADIATING FINS TO MAINTAIN OPTIMUM BALLAST OPERATIND

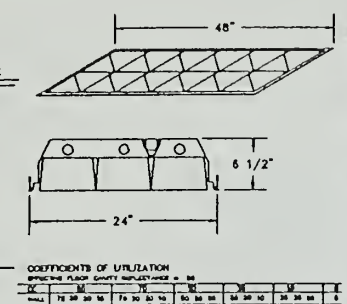
FIXTURE SHALL ALSO BE FINISHED WITH HIGH GLOSS BAKED ENAMEL. PARABOLUME LOUVER IS FIXED IN PLACE.

THE COEFFICIENT OF UTILIZATION SHALL NOT BE LESS THAN .35 BASED ON A CEILIND REFLECTANCE OF 50%, A WALL REFLECTANCE OF 30%, A FLOOR REFLECTANCE OF 20% AND A ROOM CAVITY RATIO OF 5. EACH UNIT SHALL BE COMPLETELY WIRED AND EQUIPPED WITH ALL AUXILIARIES. BALLAST SHALL BE HPF, ETL 430 MA WITH U.L. AND C.B.M. LABELS.

USE COLUMBIA CAT. NO. PDOP1-43-[illegible] APPROVED EQUAL.

LAMP		2-4-FOOT-F40 T12 CW
BALLAST	[illegible]-88	RAPID START

LIGHTING SCIENCES INC.



COEFFICIENTS OF UTILIZATION

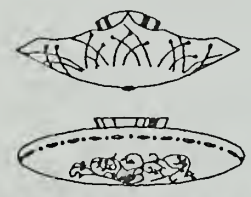
3 TUBE PARABOLIC TYPE LUMINAIRE
APPROVED FOR SURFACE MOUNTING

THE LUMINAIRE SHALL BE COMMERCIAL TYPE WITH CODE GAUGE MUTIPLE-DIE FORMED COLD ROLLED STEEL HOUSING. COVER PLATE FOR DUCT OPENING PROVIDED.

LOUVER ASSEMBLY TO BE PROVIDED WITH SELF-ALIGNING SPRING LOADED TRIGGER LATCHES AND HEAVY GAUGE STEEL HINGES WHICH ALLOW HINGING FROM EITHER SIDE. PAINTED METAL PARTS ARE PRIMED WITH A COATING OF IRON PHOSPHATE. THE REGRESS AREA IS PAINTED, BAKED MATTE BLACK ENAMEL, LOUVERS ARE TO BE PRE-ANODIZED SEMI-SPECULAR ALUMINUM.
THE COEFFICIENT OF UTILIZATION SHALL NOT BE LESS THAN .38 BASED ON A CEILING REFLECTANCE OF 50 PERCENT, WALL REFLECTANCE OF 30 PERCENT, FLOOR REFLECTANCE OF 20 PERCENT, AND A ROOM CAVITY RATIO OF 5.

BALLAST SHALL BE ENERGY SAVING, HPF, ETL, 430MA WITH U.L. AND C.B.M. LABELS.
FIXTURE TO BE GLOBE CAT. NO ALP8243-4R-05-18 OR APPROVED EQUAL.

LAMPS	F-52	3-4 FOOT-F-40 T12 CW
BALLAST	10-25-88	RAPID START



INTERIOR CEILING INCANDESCENT FIXTURE

FIXTURE SHALL BE 13" DIAMETER OR 16" SQUARE, WITH WHITE CERAMIC GLASS SHADE. LIGHT RECEPTACLE HOUSING SHALL BE 20 GAUGE ONE PIECE METAL. FIXTURE SHALL BE SUITABLE FOR 3 1/4" OR 4" OUTLET BOX, AND U.L. APPROVED FOR SURFACE MOUNTING.

LAMP	I-22 10-25-88	3-60 W A-19

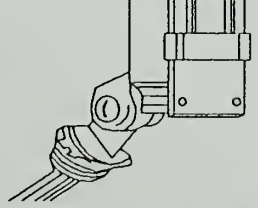


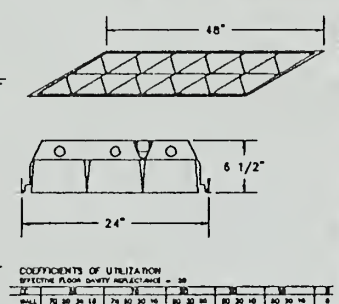
PHOTO ELECTRIC CONTROL

THE PHOTO CELL SHALL BE 3 WIRE WITH COLOR CODED LEADS, CORROSION RESISTANT WEATHER-PROOF HOUSING, 3/4" THREADED CONDUIT NIPPLE AND HERMETICALLY SEALED LIGHT SENSITIVE ELEMENT.

PHOTO CELL SHALL BE A MINIMUM 2000VA CAPACITY, TURN-ON TURN-OFF DIFFERENTIAL .5 TO 1 FOOTCANDLES, 10 SECOND MINIMUM TIME DELAY. SUPPLY WALL MOUNTING BRACKET FOR EXTERIOR WALL INSTALLATION. FURNISH WITH ADJUSTABLE LIGHT LEVEL DEVICE TO PROVIDE LIGHT LEVEL ADJUSTMENTS FROM 1 TO 10 FOOTCANDLES. VOLTAGE AS SHOWN ON DRAWINGS.

E-37
10-25-88

LIGHTING SCIENCES INC.



COEFFICIENTS OF UTILIZATION

4 TUBE PARABOLIC TYPE LUMINAIRE
APPROVED FOR SURFACE MOUNTING

THE LUMINAIRE SHALL BE COMMERCIAL TYPE WITH CODE GAUGE MUTIPLE-DIE FORMED COLD ROLLED STEEL HOUSING. COVER PLATE FOR DUCT OPENING PROVIDED.

LOUVER ASSEMBLY TO BE PROVIDED WITH SELF-ALIGNING SPRING LOADED TRIGGER LATCHES AND HEAVY GAUGE STEEL HINGES WHICH ALLOW HINGING FROM EITHER SIDE. PAINTED METAL PARTS ARE PRIMED WITH A COATING OF IRON PHOSPHATE. THE REGRESS AREA IS PAINTED, BAKED MATTE BLACK ENAMEL, LOUVERS ARE TO BE PRE-ANODIZED SEMI-SPECULAR ALUMINUM.
THE COEFFICIENT OF UTILIZATION SHALL NOT BE LESS THAN .38 BASED ON A CEILING REFLECTANCE OF 50 PERCENT, WALL REFLECTANCE OF 30 PERCENT, FLOOR REFLECTANCE OF 20 PERCENT, AND A ROOM CAVITY RATIO OF 5.

BALLAST SHALL BE ENERGY SAVING, HPF, ETL, 430MA WITH U.L. AND C.B.M. LABELS.
FIXTURE TO BE GLOBE CAT. NO ALP8244-4R-32 OR APPROVED EQUAL.

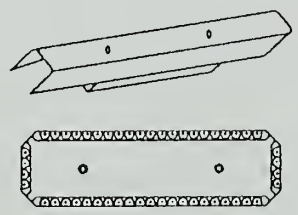
LAMPS	F-53	2-4 FOOT-F40 T12 CW
BALLAST	10-25-88	RAPID START

EXTERIOR CEILING FIXTURE



FIXTURE SHALL BE DIE-CAST ALUMINUM CONSTRUCTION. IT SHALL FIT BOTH 3 1/4" AND 4" OUTLET BOXES AND SHALL BE EQUIPPED WITH HEATPROOF NEOPRENE GASKET. THE GLOBE SHALL BE SCREW-IN OPALESCENT GLASS. FIXTURE SHALL BEAR U.L. LABEL.

LAMP	I-18 10-25-88	1 - 100W

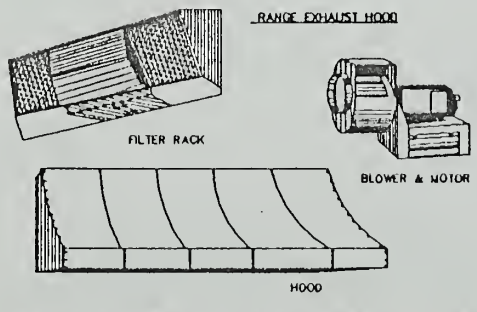


WALL MOUNTED INCANDESCENT FIXTURE

FIXTURE SHALL HAVE POLISHED WALL BRACKET, GLASS SHALL BE WHITE. APPROXIMATELY 14" WIDE FOR 2 LAMPS, APPROXIMATELY 24" WIDE FOR 4 LAMPS. FIXTURE SHALL BE U.L. APPROVED FOR HORIZONTAL WALL MOUNTING.

2 LAMP 4 LAMP	I-7 10-23-88	2-75W A-19 4-75W A-19

RANGE EXHAUST HOOD

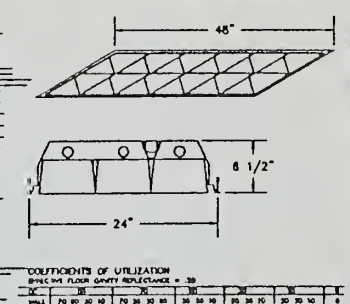


HOOD SHALL BE CONSTRUCTED OF 22 GAUGE SHEET METAL, 5'-0 X 2'-0 MINIMUM. ALL HOOD EXPOSED SURFACES SHALL BE SILVER ANODIZED ALUMINUM FINISH. UNIT SHALL BE EQUIPPED A FILTER RACK, MINIMUM OF 4 GREASE FILTERS, 2 VAPOR-TIGHT LIGHT FIXTURES. 3-SPEED FAN SWITCH, AND LIGHT SWITCH. THE BLOWER MOTOR SHALL BE 3-SPEED AND U.L. APPROVED. THE BLOWER SHALL BE MOUNTED ON VIBRATION ELIMINATING FOUNDATIONS. DUCT SHALL HAVE A FLEXIBLE CONNECTION, APPROVED BY UL AT THE BLOWER. SYSTEM SHALL TERMINATE IN A WALL DISCHARGE CAP EQUIPPED WITH BACKDRAFT DAMPER AND BIRD SCREEN. THE SYSTEM SHALL HAVE A CAPACITY OF 1100 [illegible] AT 2S INCHES STATIC PRESSURE.

LAMPS	[illegible]-88	2 - 100 W

ALL BLOCKS IN THIS DRAWING WERE INSERTED 1 TO 1. THE D-SIZE DWG. WAS PLOTTED 1 TO 1.

LIGHTING SCIENCES INC.



COEFFICIENTS OF UTILIZATION

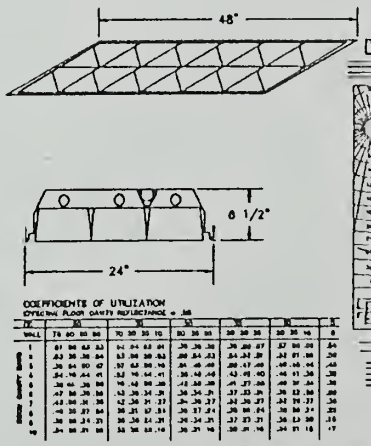
2 TUBE PARABOLIC TYPE LUMINAIRE
APPROVED FOR RECESSED MOUNTING

THE LUMINAIRE SHALL BE COMMERCIAL TYPE WITH CODE GAUGE MUTIPLE-DIE FORMED COLD ROLLED STEEL HOUSING. COVER PLATE FOR DUCT OPENING PROVIDED.

LOUVER ASSEMBLY TO BE PROVIDED WITH SELF-ALIGNING SPRING LOADED TRIGGER LATCHES AND HEAVY GAUGE STEEL HINGES WHICH ALLOW HINGING FROM EITHER SIDE. PAINTED METAL PARTS ARE PRIMED WITH A COATIND OF IRON PHOSPHATE. THE REGRESS AREA IS PAINTED, BAKED MATTE BLACK ENAMEL, LOUVERS ARE TO BE PRE-ANODIZED SEMI-SPECULAR ALUMINUM.
THE COEFFICIENT OF UTILIZATION SHALL NOT BE LESS THAN .38 BASED ON A CEILING REFLECTANCE OF 50 PERCENT, WALL REFLECTANCE OF 30 PERCENT, FLOOR REFLECTANCE OF 20 PERCENT, AND A ROOM CAVITY RATIO OF 5.

BALLAST SHALL BE ENERGY SAVING, HPF, ETL, 430MA WITH U.L. AND C.B.M. LABELS.
VOLTAGE TO BE SHOWN ON DRAWINGS.
FIXTURE TO BE GLOBE CAT. NO ALP8242-4R-12 OR APPROVED EQUAL.

LAMPS	F-55	2-4 FOOT-F-40 T12 CW
BALLAST	10-26-88	RAPID START



LIGHTING SCIENCES INC.

COEFFICIENTS OF UTILIZATION

3 TUBE PARABOLIC TYPE LUMINAIRE
APPROVED FOR RECESSED MOUNTING

THE LUMINAIRE SHALL BE COMMERCIAL TYPE WITH CODE GAUGE MULTIPLE-DIE FORMED STEEL, COLD ROLLED STEEL HOUSING. COVER PLATE FOR DUCT OPENING PROVIDED.

LOUVER ASSEMBLY TO BE PROVIDED WITH SELF-ALIGNING SPRING LOADED TRIGGER LATCHES AND HEAVY DAUGE STEEL HINGES WHICH ALLOW HINGIND FROM EITHER SIDE. PAINTED METAL PARTS ARE PRIMED WITH A COATING OF IRON PHOSPHATE. THE REGRESS AREA IS PAINTED, BAKED MATTE BLACK ENAMEL, LOUVERS ARE TO BE PRE-ANODIZED SEMI-SPECULAR ALUMINUM.
THE COEFFICIENT OF UTILIZATION SHALL NOT BE LESS THAN .38 BASED ON A CEILING REFLECTANCE OF 50 PERCENT, WALL REFLECTANCE OF 30 PERCENT, FLOOR REFLECTANCE OF 20 PERCENT, AND A ROOM CAVITY RATIO OF 5.

BALLAST SHALL BE ENENOY SAVING, HPF, ETL, 430MA WITH U.L. AND C.B.M. LABELS.
VOLTAGE TO BE SHOWN ON DRAWINGS.
FIXTURE TO BE GLOBE CAT. NO ALP8243-4R-DS-18.

LAMPS	F-56	3-4 FOOT-F-40 T12 CW
BALLAST	10-24-88	RAPID START

EFXCS002 11-29-88

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

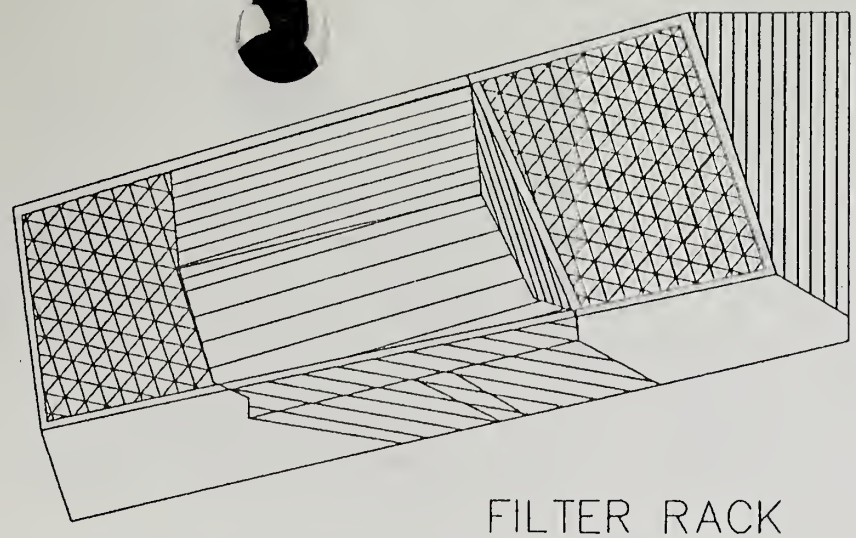
DRAWN	[illegible]	DATE 11-28-88
DESIGNED		DATE
CHECKED		DATE
APPROVED		DATE

ELECTRICAL FIXTURE CUT SHEETS

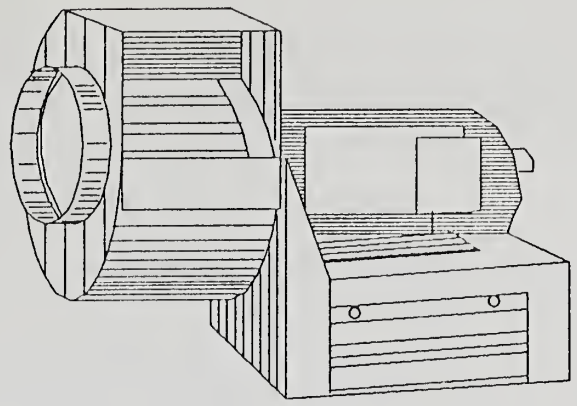
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SHT. 2
OF 10

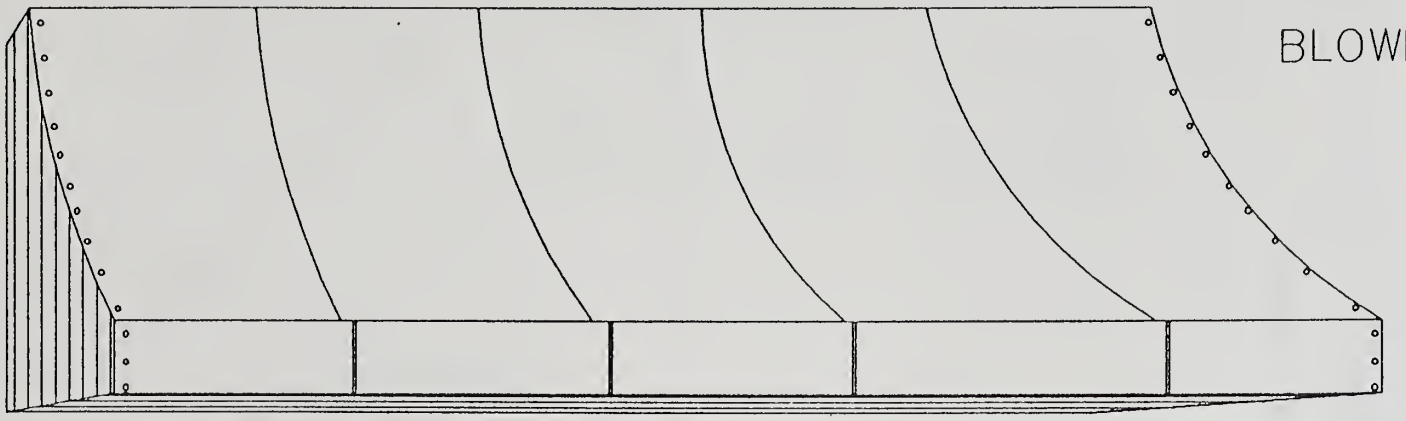
RANGE EXHAUST HOOD



FILTER RACK



BLOWER & MOTOR

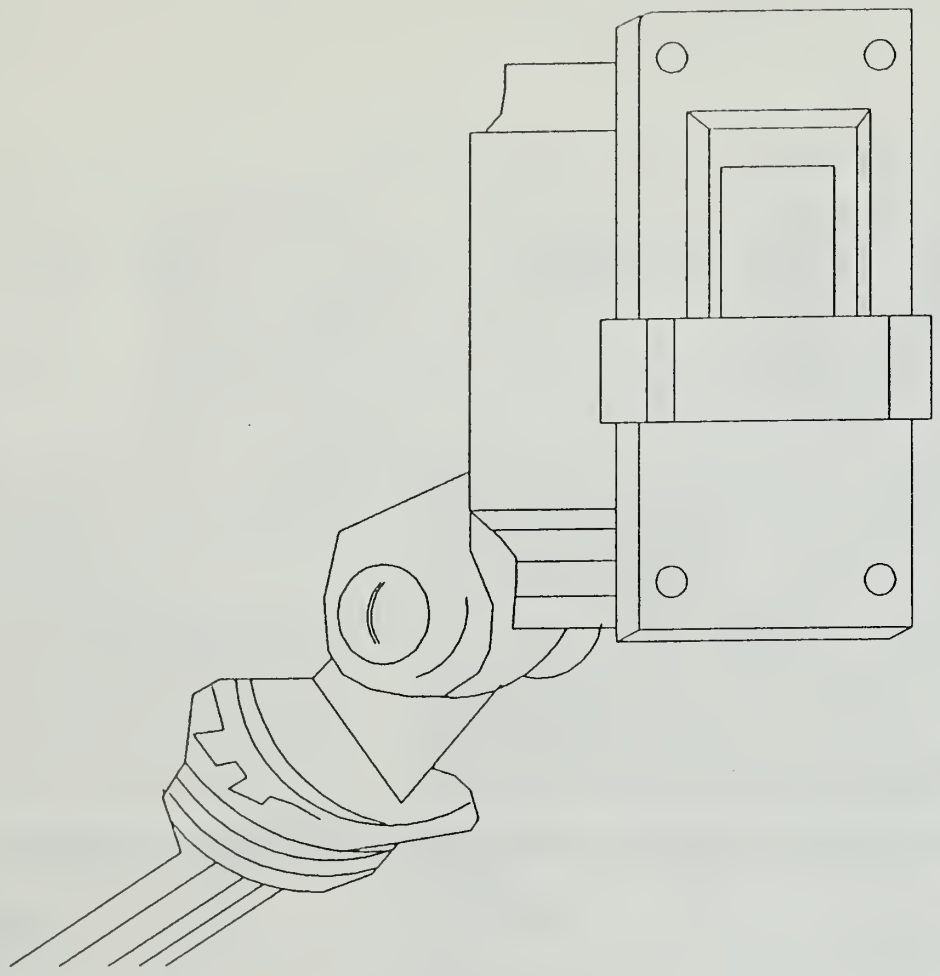


HOOD

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

HOOD SHALL BE CONSTRUCTED OF 22 GAUGE SHEET METAL, 5'–0 X 2'–0 MINIMUM. ALL HOOD EXPOSED SURFACES SHALL BE SILVER ANODIZED ALUMINUM FINISH. UNIT SHALL BE EQUIPPED A FILTER RACK, MINIMUM OF 4 GREASE FILTERS, 2 VAPOR–TIGHT LIGHT FIXTURES, 3–SPEED FAN SWITCH, AND LIGHT SWITCH. THE BLOWER MOTOR SHALL BE 3–SPEED AND U.L. APPROVED. THE BLOWER SHALL BE MOUNTED ON VIBRATION ELIMINATING FOUNDATIONS. DUCT SHALL HAVE A FLEXIBLE CONNECTION, APPROVED BY UL AT THE BLOWER. SYSTEM SHALL TERMINATE IN A WALL DISCHARGE CAP EQUIPPED WITH BACKDRAFT DAMPER AND BIRD SCREEN. THE SYSTEM SHALL HAVE A CAPACITY OF 1100 C.F.M. AT .25 INCHES STATIC PRESSURE.

LAMPS 2 – 100 W

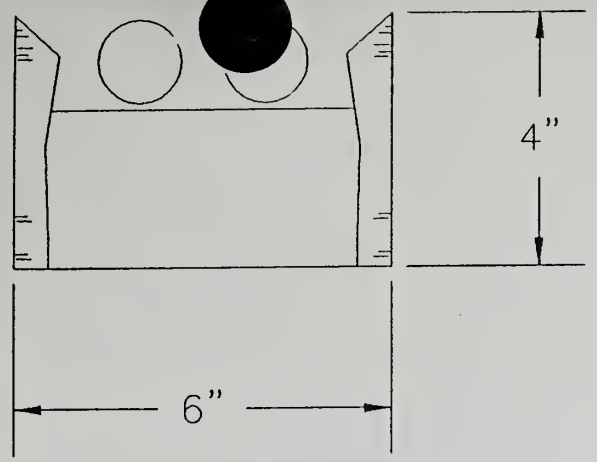


THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

PHOTO ELECTRIC CONTROL

THE PHOTO CELL SHALL BE 3 WIRE WITH COLOR CODED LEADS, CORROSION RESISTANT WEATHER-PROOF HOUSING, 3/4" THREADED CONDUIT NIPPLE AND HERMETICALLY SEALED LIGHT SENSITIVE ELEMENT.

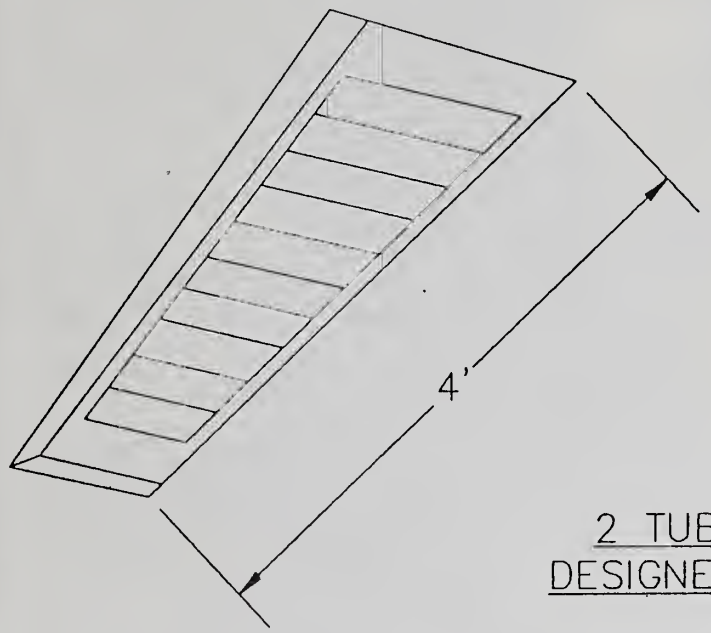
PHOTO CELL SHALL BE A MINIMUM 2000VA CAPACITY, TURN-ON TURN-OFF DIFFERENTIAL .5 TO 1 FOOTCANDLES, 15 SECOND MINIMUM TIME DELAY. SUPPLY WALL MOUNTING BRACKET FOR EXTERIOR WALL INSTALLATION. FURNISH WITH ADJUSTABLE LIGHT LEVEL DEVICE TO PROVIDE LIGHT LEVEL ADJUSTMENTS FROM 1 TO 10 FOOTCANDLES. VOLTAGE AS SHOWN ON DRAWINGS.



CAT. NO. PDOP1-43-
TEST NO. 7724
DATE: 6/11/82
EFF. 87.5%
S/MH RATIO: 1.5

ZONAL SUMMARY

ZONE	LUMENS	LAMP	FIXT
0- 30	739	11.5	13.2
0- 40	1230	19.2	21.9
0- 60	2137	33.4	38.1
0- 90	2332	36.4	41.6
90-180	3271	51.1	58.4
0-180	5603	87.5	100.0



ZONAL CAVITY C.U. FLOOR REFLECTANCE - 20%

RC	80				70				50				0
RW	70	50	30	10	70	50	30	10	70	50	30	10	0
1	85	81	78	76	77	75	72	70	64	62	60	58	33
2	78	72	67	63	71	66	62	59	58	55	52	50	29
3	72	64	58	54	65	59	54	50	54	49	46	43	25
4	66	57	51	46	60	52	47	43	49	44	40	37	22
5	60	51	44	39	55	47	41	36	45	39	35	32	19
6	55	45	39	34	50	42	36	32	42	35	31	27	17
7	51	41	34	29	46	37	32	27	38	32	27	24	14
8	47	36	30	25	43	34	28	24	35	28	24	21	12
9	43	33	26	22	39	30	24	20	32	25	21	18	11
10	40	30	23	19	37	27	22	18	30	23	19	16	9

2 TUBE PENDALUME LUMINAIRE
DESIGNED FOR PENDANT MOUNTING

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

THE LUMINAIRE SHALL BE CONSTRUCTED OF HEAVY DUTEY ALUMINUM EXTRUSIONS WITH MINIMUM EXPOSED FASTENERS. BALLAST HOUSING TO INTERLOCK WITH BODY CHANNELS AND INCORPORATES CONCEALED RADIATING FINS TO MAINTAIN OPTIMUM BALLAST OPERATING

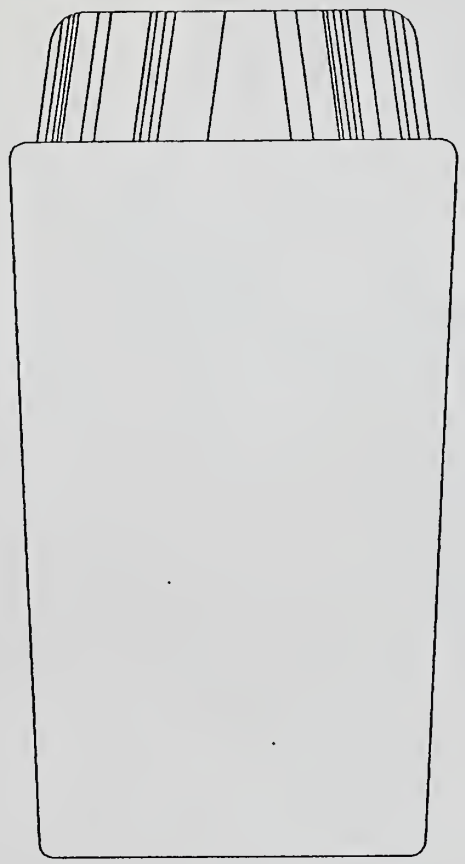
FIXTURE SHALL ALSO BE FINISHED WITH HIGH GLOSS BAKED ENAMEL. PARABOLUME LOUVER IS FIXED IN PLACE.

THE COEFFICIENT OF UTILIZATION SHALL NOT BE LESS THAN .35 BASED ON A CEILING REFLECTANCE OF 50%, A WALL REFLECTANCE OF 30%, A FLOOR REFLECTANCE OF 20% AND A ROOM CAVITY RATIO OF 5. EACH UNIT SHALL BE COMPLETELY WIRED AND EQUIPPED WITH ALL AUXILIARIES. BALLAST SHALL BE HPF, ETL 430 MA WITH U.L. AND C.B.M. LABELS.

USE COLUMBIA CAT. NO. PDOPI-43-421 OR APPROVED EQUAL.

LAMP	F-29	2-4-FOOT-F40 T12 CW
BALLAST	10-25-88	RAPID START

EXTERIOR CIELING FIXTU



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CADD CONVERSION ERRORS.

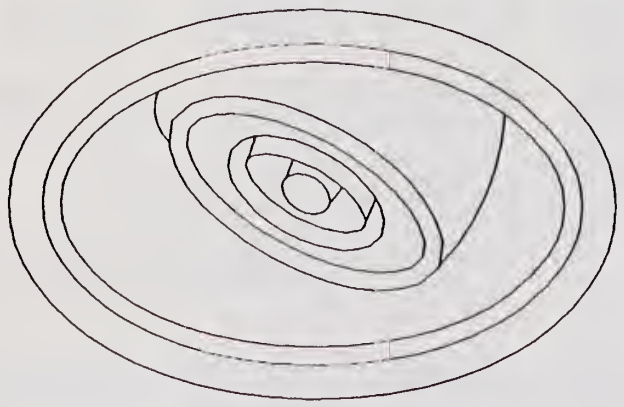
FIXTURE SHALL BE DIE-CAST ALUMINUM CONSTRUCTION.
IT SHALL FIT BOTH 3 1/4" AND 4" OUTLET BOXES AND SHALL
BE EQUIPPED WITH HEATPROOF NEOPRENE GASKET. THE GLOBE
SHALL BE SCREW-IN OPALESCENT GLASS. FIXTURE SHALL BEAR
U.L. LABEL.

I-18
10-25-88

LAMP 1 - 100W

RECESSED CEILIN XTURE

RECESSED CEILIN FIXTURE

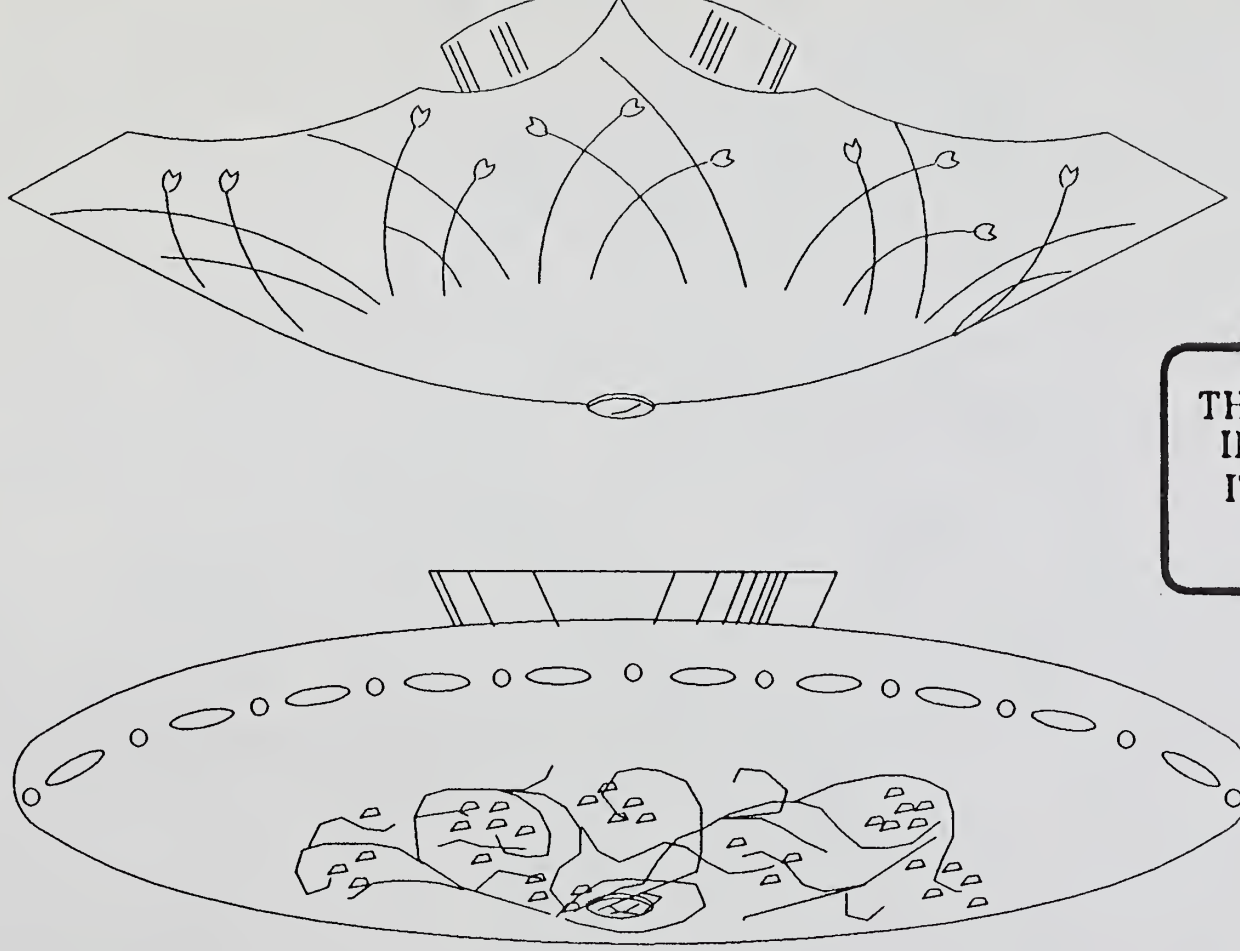


THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

FIXTURE SHALL BE CONSTRUCTED OF MINIMUM 20 GAUGE STEEL, BAKED WHITE ENAMEL HOUSING. ATTACHED PREWIRED J-BOX SHALL BE EQUIPPED WITH 1/2" INCH AND 3/4" INCH KNOCKOUTS. MINIMUM HOUSING DIMENSIONS SHALL BE 13 1/8" X 19 1/8" X 9 3/8" DEEP. MOUNTING SHALL BE EITHER BY PLASTER BRACKETS AND/OR HANGER BARS. FRAME SHALL BE STEEL WITH SATIN CHROME FINISH APPROXIMATELY 14 3/8" O.D. EYEBALL SHALL ADJUST 45° FROM VERTICAL POSITION WITH 360° ROTATION. FIXTURE SHALL BE SUITABLE FOR USE WITH 150 R/FL, R-40 MEDIUM BASE LAMP.

I-20
10-23-88

LAMP 1 - 150 R/FL, R-40



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INTERIOR CEILING INCANDESCENT FIXTURE

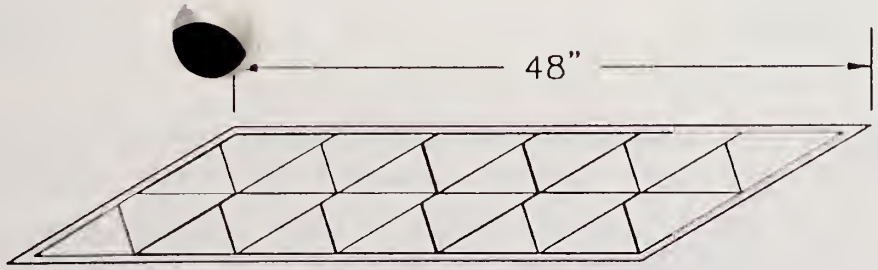
FIXTURE SHALL BE 15" DIAMETER OR 16" SQUARE, WITH WHITE CERAMIC GLASS SHADE. LIGHT RECEPTACLE HOUSING SHALL BE 20 GAUGE ONE PIECE METAL. FIXTURE SHALL BE SUITABLE FOR 3 1/4" OR 4" OUTLET BOX, AND U.L. APPROVED FOR SURFACE MOUNTING.

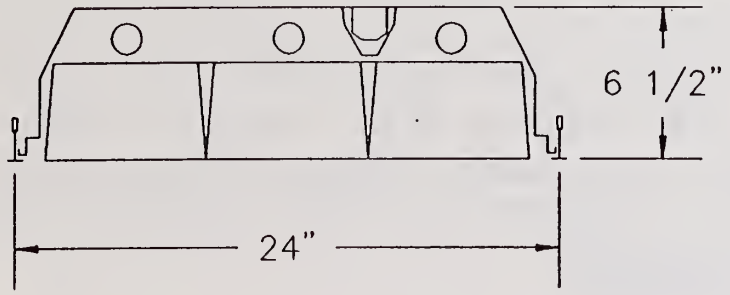
I-22
10-23-88

LAMP 3-60 W A-19

48"

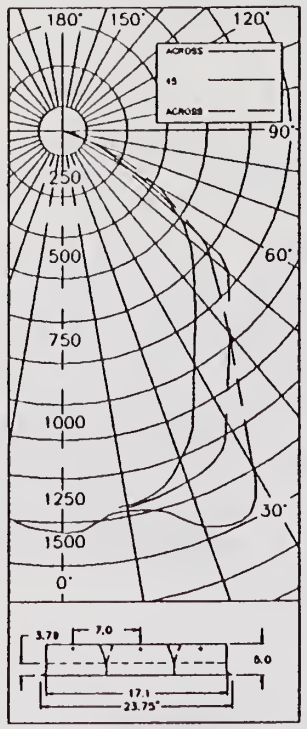
LIGHTI NCES INC.
7830 E. EVANS R. Z 85260 602-991-9260
CERTIFIED TEST REPORT NO 2708 COMPUTE PROGRAM **TEST-LITE**
GLOBE 20 IN X 4 FT RECESSED TROFFER CAT NO ALP3032-4R-05-12
12 CELL SEMI-SPECULAR LOUVER, ADVANCE BALLAST #F-240-TP





LIGHTI[illegible]NCES INC.
7830 E. EVANS R[illegible] AZ. 85260 602-991-9260

CERTIFIED TEST REPORT NO. 2798 COMPUTE[illegible] PROGRAM **TEST-LITE**
GLOBE 20 IN X 4 FT. RECESSED TROFFER, CAT NO. ALP9032-4R-05-12
12 CELL SEMI-SPECULAR LOUVER, ADVANCE BALLAST #R-240-TP
TWO F40LW/RS/WMII FLOURESCENT LAMPS, LUMEN RATING = 3050 LMS.



CANDLEPOWER SUMMARY

ANGLE	ACROSS	67.5	45	22.5	ALONG	OUTPUT LUMENS
0	1622	1622	1622	1622	1622	
5	1608	1605	1602	1595	1591	152
10	1571	1565	1555	1541	1533	
15	1568	1544	1509	1488	1477	427
20	1554	1509	1422	1383	1373	
25	1848	1565	1414	1328	1313	6727
30	1768	1655	1435	1277	1256	
35	1778	1888	1434	1197	1160	69773
40	1735	1601	1372	1087	1018	
45	1504	1441	1294	1007	8962	937
50	1076	1075	1144	914	752	
55	803	734	794	7598	571	682
60	495	476	448	474	340	
65	323	268	209	176	140	245
70	124	112	83	70	59	
75	51	49	42	36	32	5148
80	22	22	19	16	14	
85	7	7	7	5	5	9
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

0-30	1251	19.55	30.88
0-40	2148	33.57	53.02
0-60	3747	58.56	92.50
0-90	4051	63.31	100.00
40-90	1903	29.74	46.98
60-90	303	4.75	7.50
90-180	0	0.00	0.00
0-180	4051	63.31	100.00

** EFFICIENCY = 63.31% **

PAINT REFLECTANCE = 91% S/MH = 1.47
SC(ALONG) = 1.2, SC(ACROSS) = 1.6
CERTIFIED BY:
JON LEWIS DATE
JUL 08, 1977
PREPARED FOR:
GLOBE ILLUMINATION
GARDENA, CA.
SHEILDING ANGLE: 32° C -30° L

LUMINENCE SUMMARY-FOOTLAMBERTS

ANGLE	ACROSS AVG	ACROSS MAX	ACROSS M/A	ALONG AVG	ALONG MAX	ALONG M/A
45	1021	2558	2.5	606	2632	4.3
55	672	1653	2.5	478	2471	5.2
65	366	1288	3.5	158	925	5.8
75	95	184	1.9	58	88	NS
85	36	37	NS	25	26	NS

TESTED IN ACCORDANCE WITH IES PROCEDURES. TEST DISTANCE = 8 METERS (26')

COEFFICIENTS OF UTILIZATION
EFFECTIVE FLOOR CAVITY REFLECTANCE = .20

CC	80	70	50	30	10	0
WALL	70 50 30 10	70 50 30 10	50 30 10	50 30 10	50 30 10	0
1	.71 .68 .66 .64	.69 .67 .65 .63	.64 .63 .61	.62 .61 .59	.60 .59 .58	.57
2	.66 .62 .58 .55	.64 .60 .57 .55	.58 .56 .53	.56 .54 .52	.54 .53 .51	.50
3	.61 .55 .51 .48	.59 .54 .51 .47	.53 .49 .47	.51 .48 .46	.50 .47 .45	.44
4	.56 .50 .45 .41	.55 .49 .45 .41	.47 .44 .41	.46 .43 .40	.45 .42 .40	.38
5	.52 .45 .39 .36	.50 .44 .39 .36	.42 .38 .35	.41 .38 .35	.40 .37 .34	.33
6	.48 .40 .35 .31	.46 .39 .35 .31	.38 .34 .31	.37 .33 .31	.36 .33 .30	.29
7	.44 .36 .31 .27	.43 .35 .31 .27	.34 .30 .27	.33 .30 .27	.33 .29 .27	.25
8	.40032 .27 .23	.39 .33 .27 .23	.31 .26 .23	.30 .26 .23	.29 .26 .23	.22
9	.37 .29 .24 .20	.36 .28 .23 .20	.27 .23 .20	.27 .23 .20	.26 .22 .20	.19
10	.34 .26 .20 .18	.33 .26 .21 .18	.25 .21 .18	.24 .20 .17	.24 .20 .17	.16

ROOM CAVITY RATIO

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

2 TUBE PARABOLIC TYPE LUMINARE
APPROVED FOR SURFACE MOUNTING

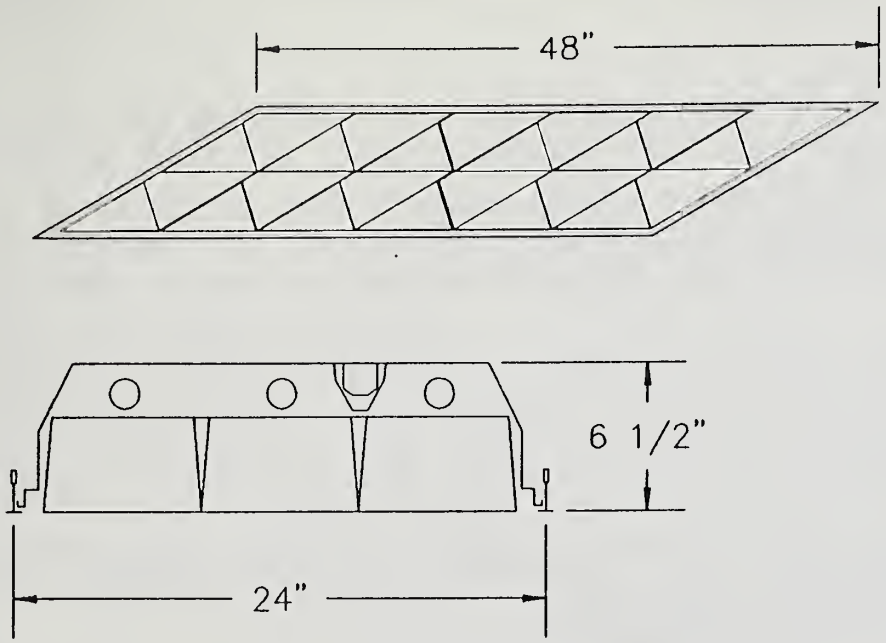
THE LUMINARE SHALL BE COMMERCIAL TYPE WITH CODE GAUGE MUTIPLE-DIE FORMED COLD ROLLED STEEL HOUSING. COVER PLATE FOR DUCT OPENING PROVIDED.

LOUVER ASSEMBLY TO BE PROVIDED WITH SELF-ALIGNING SPRING LOADED TRIGGER LATCHES AND HEAVY GAUGE STEEL HINGES WHICH ALLOW HINGING FROM EITHER SIDE. PAINTED METAL PARTS ARE PRIMED WITH A COATING OF IRON PHOSPHATE. THE REGRESS AREA IS PAINTED, BAKED MATTE BLACK ENAMEL, LOUVERS ARE TO BE PRE-ANODIZED SEMI-SPECULAR ALUMINUM.

THE COEFFICIENT OF UTILIZATION SHALL NOT BE LESS THAN .38 BASED ON A CEILING REFLECTANCE OF 50 PERCENT, WALL REFLECTANCE OF 30 PERCENT, FLOOR REFLECTANCE OF 20 PERCENT, AND A ROOM CAVITY RATIO OF 5.

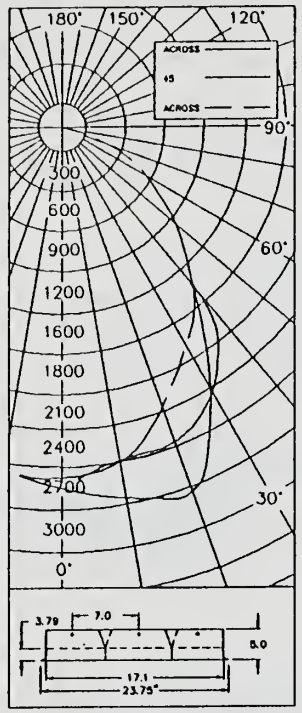
BALLAST SHALL BE ENERGY SAVING, HPF, ETL, 430MA WITH U.L. AND C.B.M. LABELS. FIXTURE TO BE GLOBE CAT. NO ALP8242-4R-12 OR APPROVED EQUAL.

LAMPS	F-51	2-4 FOOT-F-40 T12 CW
BALLAST	10-25-88	RAPID START



LIGHTIN… 7830 E. EVANS RD …ENCES INC. …E, AZ. 85260 602-991-9260

CERTIFIED TEST REPORT NO. 2798 COMPUTED BY LSI PROGRAM **TEST-LITE**
GLOBE 20 IN. X 4 FT. RECESSED TROFFER, CAT NO. ALP9032-4R-05-12
12 CELL SEMI-SPECULAR LOUVER, ADVANCE BALLAST #R-240-TP
TWO F40LW/RS/WMII FLOURESCENT LAMPS. LUMEN RATING = 3050 LMS.



CANDLEPOWER SUMMARY

ANGLE	ACROSS	67.5	45	22.5	ALONG	OUTPUT LUMENS
0	2509	2509	2509	2509	2509	
5	2506	2495	2484	2475	2470	237
10	2533	2506	2456	2419	2406	
15	2584	2523	2423	2342	2338	692
20	2688	2592	2411	2281	2234	
25	2687	2560	2341	2141	2068	1097
30	2745	2589	2330	2064	1960	
35	2515	2466	2303	1983	1846	1373
40	1971	2003	2123	1818	1639	
45	1542	1519	1774	1848	1482	1745
50	1203	1165	1295	1448	1202	
55	943	900	913	1128	820	640
60	663	579	323	620	560	
65	199	237	113	236	253	253
70	71	76	78	83	80	
75	38	41	42	43	41	48
80	19	20	20	19	19	
85	7	8	6	5	5	9
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

0-30	2026	21.11	34.98
0-40	3399	35.41	58.68
0-60	5484	57.13	94.87
0-90	5793	60.35	100.00
40-90	2393	24.94	41.32
60-90	308	3.22	5.33
90-180	0	0.00	0.00
0-180	5793	60.35	100.00

** EFFICIENCY = 60.35% **

PAINT REFLECTANCE = .87 S/MH = 1.47
SC(ALONG) = 1.2, SC(ACROSS) = 1.6
CERTIFIED BY:
JON LEWIS DATE
JUL 08, 1977
PREPARED FOR:
GLOBE ILLUMINATION
GARDENA, CA.
SHEILDING ANGLE: 32° C -30° L

LUMINENCE SUMMARY-FOOTLAMBERTS

ANGLE	ACROSS AVG	ACROSS MAX	ACROSS M/A	ALONG AVG	ALONG MAX	ALONG M/A
45	1047	2332	2.2	988	2789	2.9
55	789	1646	2.1	768	2583	3.4
65	227	1074	4.7	288	617	2.2
75	71	72	1.0	76	91	1.2
85	37	64	1.7	30	55	1.6

TESTED IN ACCORDANCE WITH IES PROCEDURES. TEST DISTANCE = 8 METERS (26')

COEFFICIENTS OF UTILIZATION

EFFECTIVE FLOOR CAVITY REFLECTANCE = .20

CC	80	70	50	30	10	0
WALL	70 50 30 10	70 50 30 10	50 30 10	50 30 10	50 30 10	0
1	.67 .65 .63 .62	.66 .64 .62 .61	.62 .60 .59	.59 .58 .57	.57 .56 .55	.54
2	.63 .59 .56 .54	.62 .58 .55 .53	.56 .54 .52	.54 .52 .51	.53 .51 .50	.50
3	.58 .54 .50 .47	.57 .53 .49 .46	.51 .49 .46	.50 .47 .45	.49 .46 .44	.43
4	.54 .48 .44 .41	.53 .48 .44 .41	.46 .43 .40	.43 .42 .40	.44 .41 .39	.38
5	.50 .44 .39 .36	.49 .43 .39 .35	.42 .38 .35	.41 .37 .35	.40 .37 .34	.33
6	.47 .39 .35 .32	.43 .39 .34 .31	.38 .34 .31	.37 .33 .31	.36 .33 .30	.31
7	.43 .36 .31 .28	.42 .35 .31 .27	.34 .30 .27	.33 .30 .27	.33 .29 .27	.29
8	.40 .32 .27 .24	.39 .31 .27 .24	.32 .27 .24	.30 .26 .24	.29 .26 .24	.26
9	.36 .29 .24 .21	.36 .28 .24 .21	.28 .24 .21	.27 .23 .21	.26 .23 .20	.22
10	.34 .26 .21 .18	.33 .26 .22 .18	.25 .21 .18	.25 .21 .18	.24 .21 .18	.17

ROOM CAVITY RATIO

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

3 TUBE PARABOLIC TYPE LUMINARE APPROVED FOR SURFACE MOUNTING

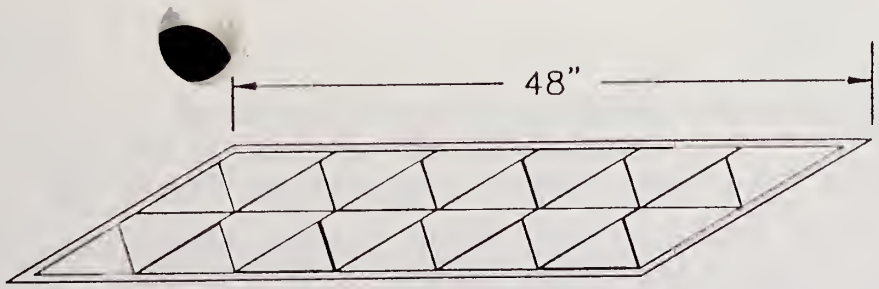
THE LUMINARE SHALL BE COMMERCIAL TYPE WITH CODE GAUGE MUTIPLE-DIE FORMED COLD ROLLED STEEL HOUSING. COVER PLATE FOR DUCT OPENING PROVIDED.

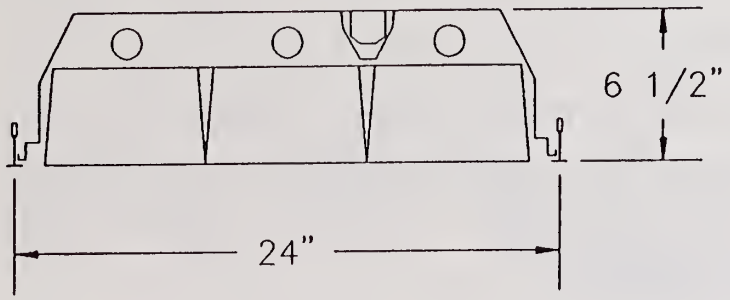
LOUVER ASSEMBLY TO BE PROVIDED WITH SELF-ALIGNING SPRING LOADED TRIGGER LATCHES AND HEAVY GAUGE STEEL HINGES WHICH ALLOW HINGING FROM EITHER SIDE. PAINTED METAL PARTS ARE PRIMED WITH A COATING OF IRON PHOSPHATE. THE REGRESS AREA IS PAINTED, BAKED MATTE BLACK ENAMEL, LOUVERS ARE TO BE PRE-ANODIZED SEMI-SPECULAR ALUMINUM.
THE COEFFICIENT OF UTILIZATION SHALL NOT BE LESS THAN .38 BASED ON A CEILING REFLECTANCE OF 50 PERCENT, WALL REFLECTANCE OF 30 PERCENT, FLOOR REFLECTANCE OF 20 PERCENT, AND A ROOM CAVITY RATIO OF 5.

BALLAST SHALL BE ENERGY SAVING, HPF, ETL, 430MA WITH U.L. AND C.B.M. LABELS.
FIXTURE TO BE GLOBE CAT. NO ALP9243-4R-05-18 OR APPROVED EQUAL.

LAMPS [redacted] F-52 [redacted] OOT-F-40 T12 CW
BALLAST [redacted] 10-25-88 R[redacted] START

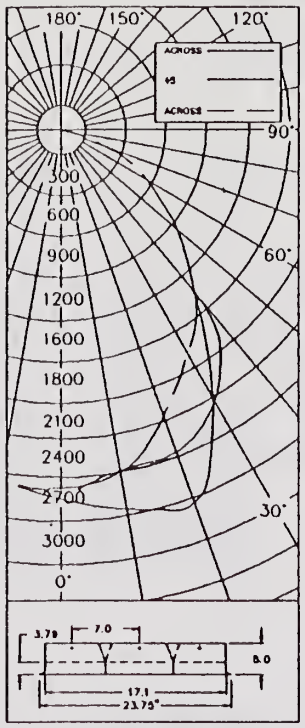
48"
LIGHTIN… 7830 E. EVANS RD …ENCES INC. …E, AZ. 85260 602-991-9260
CERTIFIED TEST REPORT NO 2798 COMPUTED BY LSI PROGRAM **TEST-LITE**
GLOBE 20 IN. X 4 FT. RECESSED TROFFER, CAT NO. ALP9032-4R-05-12
12 CELL SEMI-SPECULAR LOUVER, ADVANCE BALLAST #R-240-TP





LIGHTIN[illegible]ENCES INC.
7830 E. EVANS RD [illegible] AZ. 85260 602-991-9260

CERTIFIED TEST REPORT NO. 2798 COMPUTED BY LSI PROGRAM **IEST-LITE**
GLOBE 20 IN X 4 FT. RECESSED TROFFER, CAT NO. ALP8032-4R-05-12
12 CELL SEMI-SPECULAR LOUVER, ADVANCE BALLAST #R-240-TP
TWO F40CW/RS/WM11 FLOURESCENT LAMPS, LUMEN RATING = 3050 LMS.



CANDLEPOWER SUMMARY

ANGLE	ACROSS	67.5	45	22.5	ALONG	OUTPUT LUMENS
0	3442	3442	3442	3442	3442	
5	3491	3482	3460	3433	3422	329
10	3557	3531	3450	3356	3315	
15	3590	3521	3395	3243	3163	959
20	3636	3557	3302	3127	3009	
25	3293	3278	3213	2986	2814	1436
30	2825	2832	2959	2799	2827	
35	2248	2298	2562	2629	2442	1529
40	1773	1726	1986	2303	1804	
45	1566	1454	1485	1910	2121	1280
50	1476	1293	1192	1448	1481	
55	948	907	661	841	982	774
60	265	304	293	345	351	
65	137	142	143	147	145	169
70	76	61	62	64	82	
75	46	50	51	52	51	55
80	24	25	26	27	27	
85	8	9	10	10	10	12
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

0-30	2724	21.291	41.648
0-40	4253	33.23	65.00
0-60	6307	49.28	96.36
0-90	6544	51.13	100.00
40-90	2290	17.89	35.00
60-90	236	1.85	3.61
90-180	0	0.00	0.00
0-180	6544	51.13	100.00

** EFFICIENCY = 51.13% **

PAINT REFLECTANCE = .86 S/MH = 1.47
SC(ALONG) = 1.2, SC(ACROSS) = 1.8
CERTIFIED BY:
JON LEWIS DATE
JUL 06, 1977
PREPARED FOR:
GLOBE ILLUMINATION
GARDENA, CA.
SHIELDING ANGLE: 32° C -30° L

LUMINENCE SUMMARY-FOOTLAMBERTS

ANGLE	ACROSS AVG	ACROSS MAX	ACROSS M/A	ALONG AVG	ALONG MAX	ALONG M/A
45	1070	1576	1.52	1227	2616	2.1
55	798	2150	2.7	824	1496	1.6
65	157	175	1.1	185	191	1.2
75	90	128	1.4	95	116	1.2
85	46	65	1.4	54	71	1.3

TESTED IN ACCORDANCE WITH IES PROCEDURES. TEST DISTANCE = 8 METERS (26')

COEFFICIENTS OF UTILIZATION

EFFECTIVE FLOOR CAVITY REFLECTANCE = .20

CC	WALL	80	70	50	30	10	0
ROOM CAVITY RATIO	1	.57 .56 .54 .53	.56 .55 .53 .52	.52 .51 .50	.50 .50 .49	.49 .48 .47	.46
	2	.54 .51 .48 .46	.53 .50 .48 .46	.48 .46 .45	.47 .45 .44	.45 .441.43	.42
	3	.50 .46 .43 .41	.49 .46 .43 .40	.44 .42 .40	.43 .41 .39	.42 .40 .39	.38
	4	.47 .42 .39 .36	.46 .38 .38 .36	.40 .38 .35	.39 .37 .35	.38 .36 .35	.34
	5	.44 .38 .35 .32	.43 .42 .34 .32	.37 .34 .31	.36 .33 .31	.35 .33 .31	.30
	6	.41 .35 .31 .29	.40 .35 .31 .28	.34 .31 .28	.33 .30 .28	.32 .30 .28	.27
	7	.38 .32 .28 .26	.37 .31 .28 .25	.31 .27 .25	.30 .27 .25	.29 .27 .25	.24
	8	.35 .29 .25 .22	.34 .28 .25 .22	.28 .25 .22	.27 .24 .22	.27 .24 .22	.21
	9	.32 .26 .22 .20	.32 .26 .22 .20	.25 .22 .20	.25 .22 .19	.24 .21 .19	.19
	10	.30 .24 .20 .18	.29 .24 .20 .18	.23 .20 .18	.23 .20 .17	.22 .19 .46	.16

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

4 TUBE PARABOLIC TYPE LUMINARE
APPROVED FOR RECESSED MOUNTING

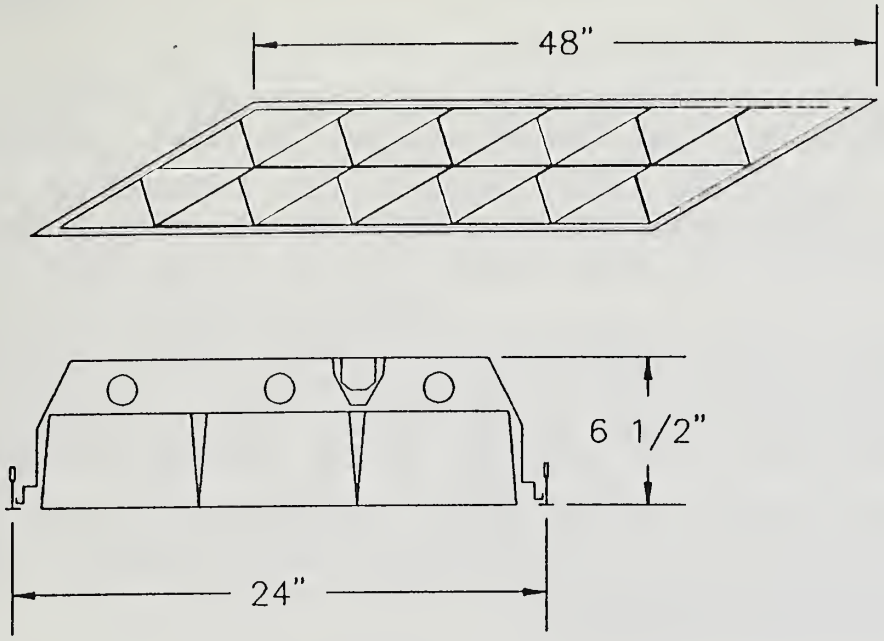
THE LUMINARE SHALL BE COMMERCIAL TYPE WITH CODE GAUGE MUTIPLE-DIE FORMED COLD ROLLED STEEL HOUSING. COVER PLATE FOR DUCT OPENING PROVIDED.

LOUVER ASSEMBLY TO BE PROVIDED WITH SELF-ALIGNING SPRING LOADED TRIGGER LATCHES AND HEAVY GAUGE STEEL HINGES WHICH ALLOW HINGING FROM EITHER SIDE. PAINTED METAL PARTS ARE PRIMED WITH A COATING OF IRON PHOSPHATE. THE REGRESS AREA IS PAINTED, BAKED MATTE BLACK ENAMEL, LOUVERS ARE TO BE PRE-ANODIZED SEMI-SPECULAR ALUMINUM.

THE COEFFICIENT OF UTILIZATION SHALL NOT BE LESS THAN .38 BASED ON A CEILING REFLECTANCE OF 50 PERCENT, WALL REFLECTANCE OF 30 PERCENT, FLOOR REFLECTANCE OF 20 PERCENT, AND A ROOM CAVITY RATIO OF 5.

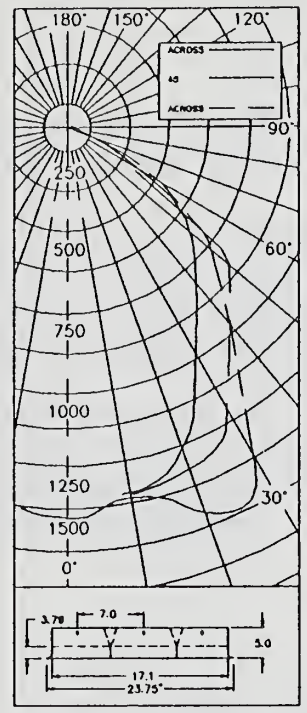
BALLAST SHALL BE ENERGY SAVING, HPF, ETL, 430MA WITH U.L. AND C.B.M. LABELS. FIXTURE TO BE GLOBE CAT. NO ALP8244-4R-32 OR APPROVED EQUAL.

LAMPS	F-53	2-4 FOOT-F40 T12 CW
BALLAST	10-25-88	RAPID START



LIGHTIN 7830 E. EVANS RO. ENCES INC. E, AZ. 85260 602-991-9260

CERTIFIED TEST REPORT NO. 2796 COMPUTED BY LSI PROGRAM "TEST-LITE"
GLOBE 20 IN. X 4 FT. RECESSED TROFFER, CAT NO. ALP9032-4R-05-12
12 CELL SEMI-SPECULAR LOUVER, ADVANCE BALLAST #R-240-TP
TWO F40CW/RS/WMII FLOURESCENT LAMPS. LUMEN RATING = 3050 LMS.



CANDLEPOWER SUMMARY

ANGLE	ACROSS	67.5	45	22.5	ALONG	OUTPUT LUMENS
0	1622	1622	1622	1622	1622	
5	1606	1605	1602	1595	1591	152
10	1571	1565	1555	1541	1533	
15	1566	1544	1509	1488	1477	427
20	1554	1509	1422	1383	1373	
25	1646	1565	1414	1326	1313	8727
30	1768	1655	1435	1277	1258	
35	1776	1666	1434	1197	1160	69773
40	1735	1601	1372	1087	1018	
45	1504	1441	1294	1007	8962	937
50	1078	1075	1144	914	752	
55	803	734	794	7598	571	862
60	495	476	448	474	340	
65	323	268	209	176	140	245
70	124	112	83	70	59	
75	51	49	42	36	32	5148
80	22	22	19	16	14	
85	7	7	7	5	5	9
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

0-30	1251	19.55	30.86
0-40	2148	33.57	53.02
0-60	3747	58.58	92.50
0-90	4051	63.31	100.00
40-90	1903	29.74	46.98
60-90	303	4.75	7.50
90-180	0	0.00	0.00
0-180	4051	63.31	100.00

** EFFICIENCY = 63.31% **

PAINT REFLECTANCE = 91% S/MH = 1.47
SC(ALONG) = 1.2, SC(ACROSS) = 1.6
CERTIFIED BY:
JON LEWIS DATE
JUL 08, 1977
PREPARED FOR:
GLOBE ILLUMINATION
GARDENA, CA.
SHIELDING ANGLE: 32° C -30° L

LUMINENCE SUMMARY-FOOTLAMBERTS

ANGLE	ACROSS AVG	ACROSS MAX	ACROSS M/A	ALONG AVG	ALONG MAX	ALONG M/A
45	1021	2558	2.5	606	2632	4.3
55	672	1653	2.5	478	2471	5.2
65	368	1286	3.5	158	925	5.8
75	95	184	1.9	58	88	NS
85	36	37	NS	25	26	NS

TESTED IN ACCORDANCE WITH IES PROCEDURES. TEST DISTANCE = 8 METERS (26')

COEFFICIENTS OF UTILIZATION

EFFECTIVE FLOOR CAVITY REFLECTANCE = .20

CC	80	70	50	30	10	0
WALL	70 50 30 10	70 50 30 10	50 30 10	50 30 10	50 30 10	0
1	.71 .68 .66 .64	.69 .67 .65 .63	.64 .63 .61	.62 .61 .59	.60 .59 .58	.57
2	.66 .62 .58 .55	.64 .60 .57 .55	.58 .56 .53	.56 .54 .52	.54 .53 .51	.50
3	.61 .55 .51 .48	.59 .54 .51 .47	.53 .49 .47	.51 .48 .46	.50 .47 .45	.44
4	.56 .50 .45 .41	.55 .49 .45 .41	.47 .44 .41	.46 .43 .40	.45 .42 .40	.38
5	.52 .45 .39 .36	.50 .44 .39 .36	.42 .38 .35	.41 .38 .35	.40 .37 .34	.33
6	.48 .40 .35 .31	.46 .39 .35 .31	.38 .34 .31	.37 .33 .31	.36 .33 .30	.29
7	.44 .36 .31 .27	.43 .35 .31 .27	.34 .30 .27	.33 .30 .27	.33 .29 .27	.25
8	.40032 .27 .23	.39 .33 .27 .23	.31 .26 .23	.30 .26 .23	.29 .26 .23	.22
9	.37 .29 .24 .20	.36 .28 .23 .20	.27 .23 .20	.27 .23 .20	.26 .22 .20	.19
10	.34 .26 .20 .18	.33 .26 .21 .18	.25 .21 .18	.24 .20 .17	.24 .20 .17	.16

ROOM CAVITY RATIO

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

2 TUBE PARABOLIC TYPE LUMINARE
APPROVED FOR RECESSED MOUNTING

THE LUMINARE SHALL BE COMMERCIAL TYPE WITH CODE GAUGE MUTIPLE-DIE FORMED COLD ROLLED STEEL HOUSING. COVER PLATE FOR DUCT OPENING PROVIDED.

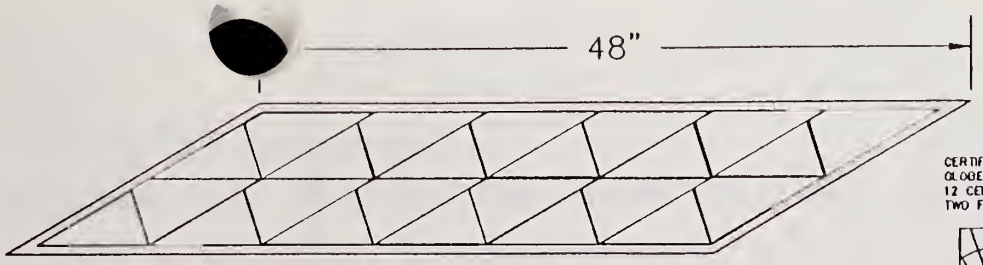
LOUVER ASSEMBLY TO BE PROVIDED WITH SELF-ALIGNING SPRING LOADED TRIGGER LATCHES AND HEAVY GAUGE STEEL HINGES WHICH ALLOW HINGING FROM EITHER SIDE. PAINTED METAL PARTS ARE PRIMED WITH A COATING OF IRON PHOSPHATE. THE REGRESS AREA IS PAINTED, BAKED MATTE BLACK ENAMEL, LOUVERS ARE TO BE PRE-ANODIZED SEMI-SPECULAR ALUMINUM.

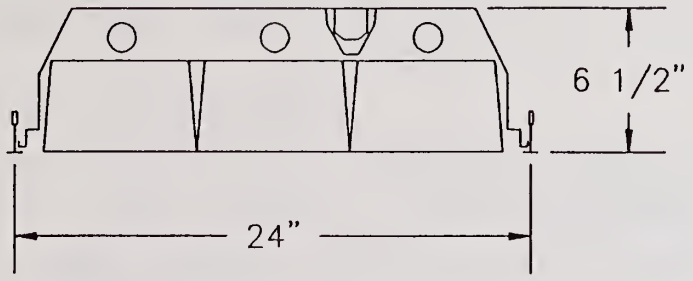
THE COEFFICIENT OF UTILIZATION SHALL NOT BE LESS THAN .38 BASED ON A CEILING REFLECTANCE OF 50 PERCENT, WALL REFLECTANCE OF 30 PERCENT, FLOOR REFLECTANCE OF 20 PERCENT, AND A ROOM CAVITY RATIO OF 5.

BALLAST SHALL BE ENERGY SAVING, HPF, ETL, 430MA WITH U.L. AND C.B.M. LABELS. VOLTAGE TO BE SHOWN ON DRAWINGS.

FIXTURE TO BE GLOBE CAT. NO ALP8242-4R-12 OR APPROVED EQUAL.

LAMPS [redacted] FOOT-F-40 T12 CW
BALLAST F-55 [redacted] START
10-25-88

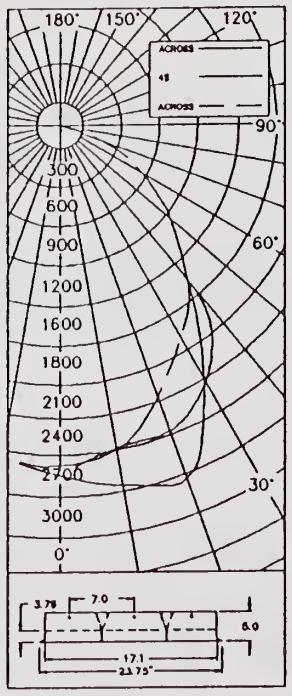




LIGHTING SCIENCES INC.

7830 E. EVANS RD. SCOTTSDALE, AZ. 85260 602-991-9260

CERTIFIED TEST REPORT NO. 2796 COMPUTED BY LSI PROGRAM "TEST-LITE"
GLOBE 20 IN X 4 FT. RECESSED TROFFER, CAT NO. ALP9032-4R-05-12
12 CELL SEMI-SPECULAR LOUVER, ADVANCE BALLAST #R-240-TP
TWO F40LW/RS/WWIII FLOURESCENT LAMPS. LUMEN RATING = 3050 LMS.



CANDLEPOWER SUMMARY

ANGLE	ACROSS	67.5	45	22.5	ALONG	OUTPUT LUMENS
0	2509	2509	2508	2509	2509	
5	2506	2495	2484	2475	2470	237
10	2533	2506	2458	2419	2408	
15	2584	2523	2423	2342	2336	692
20	2606	2592	2411	2261	2234	
25	2667	2580	2341	2141	2068	1097
30	2745	2599	2330	2064	1960	
35	2515	2468	2303	1983	1846	1373
40	1971	2003	2123	1816	1639	
45	1542	1519	1774	1648	1482	1745
50	1203	1165	1295	1448	1202	
55	943	900	913	1128	920	840
60	663	579	323	620	560	
65	199	237	113	236	253	253
70	71	76	78	83	60	
75	38	41	42	43	41	48
80	19	20	20	19	19	
85	7	6	6	6	5	9
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

0-30	2028	21.11	34.98
0-40	3399	35.41	58.68
0-60	5484	57.13	94.67
0-90	5793	60.35	100.00
40-90	2393	24.94	41.32
60-90	308	3.22	5.33
90-180	0	0.00	0.00
0-180	5793	60.35	100.00

** EFFICIENCY = 60.35% **

PAINT REFLECTANCE = .87 S/MH = 1.47
SC(ALONG) = 1.2, SC(ACROSS) = 1.6
CERTIFIED BY:
JON LEWIS DATE
JUL 08, 1977
PREPARED FOR:
GLOBE ILLUMINATION
GARDENA, CA.
SHEILDING ANGLE: 32° C -30° L

LUMINENCE SUMMARY-FOOTLAMBERTS

ANGLE	ACROSS AVG	ACROSS MAX	ACROSS M/A	ALONG AVG	ALONG MAX	ALONG M/A
45	1047	2332	2.2	968	2769	2.9
55	789	1646	2.1	768	2583	3.4
65	227	1074	4.7	286	617	2.2
75	71	72	1.0	76	91	1.2
85	37	64	1.7	30	55	1.6

TESTED IN ACCORDANCE WITH IES PROCEDURES. TEST DISTANCE = 8 METERS (26')

COEFFICIENTS OF UTILIZATION

EFFECTIVE FLOOR CAVITY REFLECTANCE = .20

CC		80	70	50	30	10	0
WALL		70 50 30 10	70 50 30 10	50 30 10	50 30 10	50 30 10	0
ROOM CAVITY RATIO	1	.67 .65 .63 .62	.66 .64 .62 .61	.62 .60 .59	.59 .58 .57	.57 .56 .55	.54
	2	.63 .59 .56 .54	.62 .58 .55 .53	.56 .54 .52	.54 .52 .51	.53 .51 .50	.50
	3	.58 .54 .50 .47	.57 .53 .49 .46	.51 .49 .46	.50 .47 .45	.49 .46 .44	.43
	4	.54 .48 .44 .41	.53 .48 .44 .41	.46 .43 .40	.43 .42 .40	.44 .41 .39	.38
	5	.50 44 .39 .36	.49 .43 .39 .35	.42 .38 .35	.41 .37 .35	.40 .37 .34	.33
	6	.47 .39 .35 .32	.43 .39 .34 .31	.38 .34 .31	.37 .33 .31	.36 .33 .30	.29
	7	.43 .36 .31 .28	.42 .35 .31 .27	.34 .30 .27	.33 .30 .27	.33 .29 .27	.26
	8	.40 .32 .27 .24	.39 .31 .27 .24	.32 .27 .24	.30 .26 .24	.29 .26 .24	.22
	9	.36 .29 .24 .21	.36 .28 .24 .21	.28 .24 .21	.27 .23 .21	.26 .23 .20	.19
	10	.34 .26 .21 .18	.33 .26 .22 .18	.25 .21 .18	.25 .21 .18	.24 .21 .18	.17

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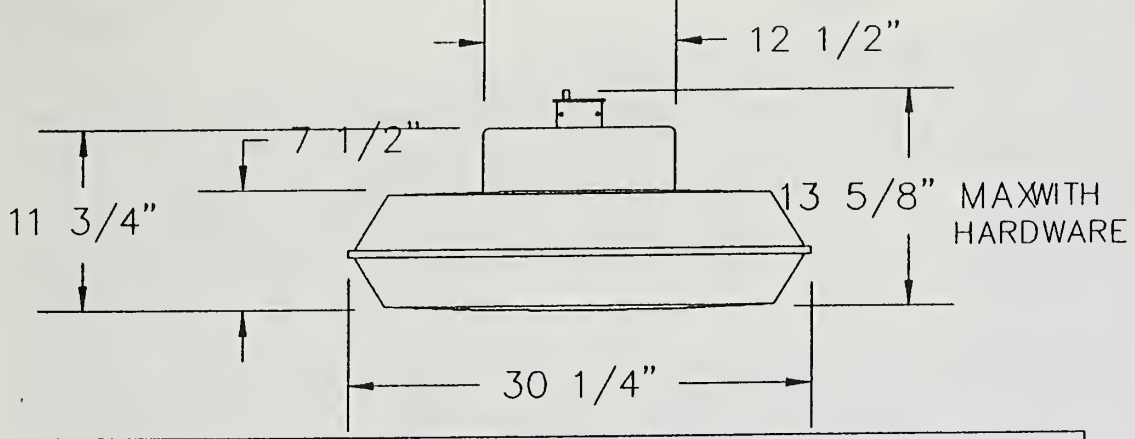
3 TUBE PARABOLIC TYPE LUMINARE
APPROVED FOR RECESSED MOUNTING

THE LUMINARE SHALL BE COMMERCIAL TYPE WITH CODE GAUGE MULTIPLE-DIE FORMED STEEL, COLD ROLLED STEEL HOUSING. COVER PLATE FOR DUCT OPENING PROVIDED.

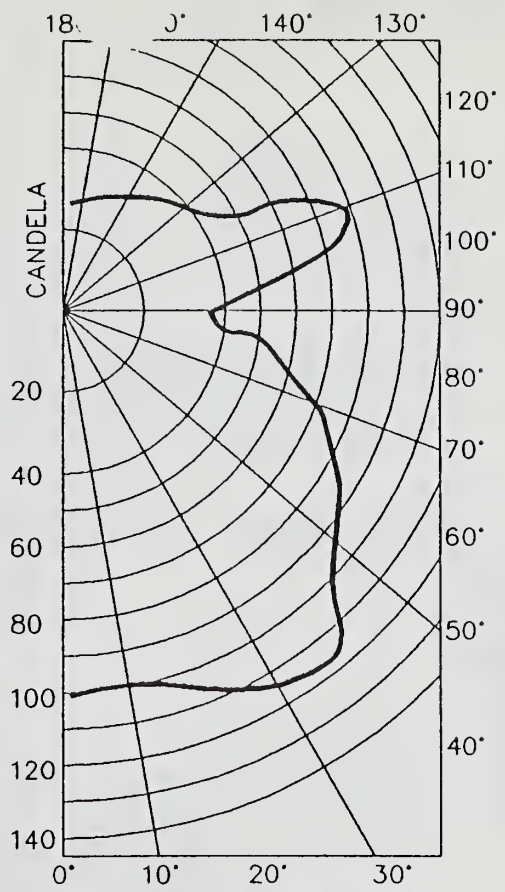
LOUVER ASSEMBLY TO BE PROVIDED WITH SELF-ALIGNING SPRING LOADED TRIGGER LATCHES AND HEAVY GAUGE STEEL HINGES WHICH ALLOW HINGING FROM EITHER SIDE. PAINTED METAL PARTS ARE PRIMED WITH A COATING OF IRON PHOSPHATE. THE REGRESS AREA IS PAINTED, BAKED MATTE BLACK ENAMEL, LOUVERS ARE TO BE PRE-ANODIZED SEMI-SPECULAR ALUMINUM.
THE COEFFICIENT OF UTILIZATION SHALL NOT BE LESS THAN .38 BASED ON A CEILING REFLECTANCE OF 50 PERCENT, WALL REFLECTANCE OF 30 PERCENT, FLOOR REFLECTANCE OF 20 PERCENT, AND A ROOM CAVITY RATIO OF 5.

BALLAST SHALL BE ENERGY SAVING, HPF, ETL, 430MA WITH U.L. AND C.B.M. LABELS.
VOLTAGE TO BE SHOWN ON DRAWINGS.
FIXTURE TO BE GLOBE CAT. NO ALP8243-4R-05-18.

LAMPS 3-4 FOOT-F-40 T12 CW
BALLAST RAPID START



EFFECTIVE CEILING CAVITY REFLECTANCE–PERCENT																
WALL		80			70			50			30			10			0
REFLECTANCE		50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
ROOM CAVITY RATIO (RCR)	0	.87	.84	.81	.82	.79	.76	.71	.69	.67	.62	.60	.59	.53	.52	.52	.47
	1	.77	.73	.69	.72	.69	.65	.63	.60	.58	.55	.53	.51	.47	.46	.44	.40
	2	.66	.62	.58	.62	.58	.54	.54	.51	.48	.47	.45	.43	.41	.39	.37	.34
	3	.57	.52	.47	.53	.49	.45	.47	.43	.40	.41	.38	.35	.35	.33	.31	.28
	4	.48	.43	.39	.46	.41	.37	.40	.36	.33	.35	.32	.29	.30	.28	.25	.23
	5	.41	.36	.31	.39	.33	.30	.34	.30	.27	.30	.26	.24	.25	.23	.21	.19
	6	.35	.29	.25	.33	.28	.24	.29	.25	.22	.25	.22	.19	.21	.19	.17	.15
	7	.29	.24	.21	.24	.23	.20	.24	.21	.18	.21	.18	.16	.18	.16	.14	.13
	8	.25	.21	.17	.21	.19	.17	.21	.18	.15	.18	.16	.14	.15	.13	.12	.11
	9	.22	.18	.16	.18	.17	.15	.18	.15	.13	.16	.14	.12	.13	.12	.11	.10
	10	.20	.17	.15	.28	.16	.15	.16	.14	.13	.14	.13	.12	.12	.11	.10	.09



TESTED AT 25' WITH LAMP RATED @ 1000 LUMENS. IF DATA IS DESIRED FOR OTHER LAMP LUMENS MULTIPLY CANDELA AND LUMEN VALUES GIVEN BT RATIO–DIFFERENT LAMP RATING DIVIDED BY 1000 LUMENS

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HPS–21 250 WATT HIGH PRESSURE SODIUM LUMINIARE

FIXTURE SHALL HAVE DURABLE ALUMINUM BALLAST HOUSING WITH ELECTRO–COAT GRAY FINISH, UV STABILIZED INJECTION MOLDED ACRYLIC REFLECTOR FOR LOW BRIGHTNESS, PRIMARY QUICK DISCONNECT PLUG AND BALLAST SAFETY CHAIN PROVISIONS.

LUMINAIRE SHALL BE ABLE TO BE CEILING MOUNTED OR PENDANT HUNG AND HAVE INSTANDT ON AND OFF QUARTZ SAFETY LIGHTING AS SHOWN ON DRAWINGS.

THE COEFFICIENT OF UTILIZATION SHALL BE NOT LESS THAN .47 BASED ON CEILING REFLECTANCE OF 50%, WALL REFLECTANCE OF 30%, FLOOR REFLECT–ANCE OF 20%, AND A ROOM CAVITY RATIO OF 3.

PROVIDE G.E. VERSAGLOW 250W FIXTURE AO APPROVEDEQUAL, WITH VOLTAGE AS SHOWN ON DRAWINGS.

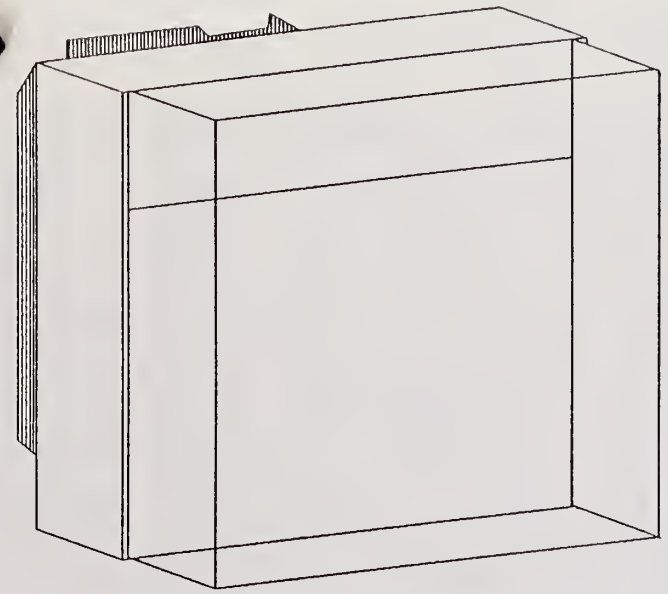
LAMP — (1) 250W LUCAXLOX

BALLAST — RE[illegible]LATOR

HPS–21

10–23–88





HPS – LUMINAIRE

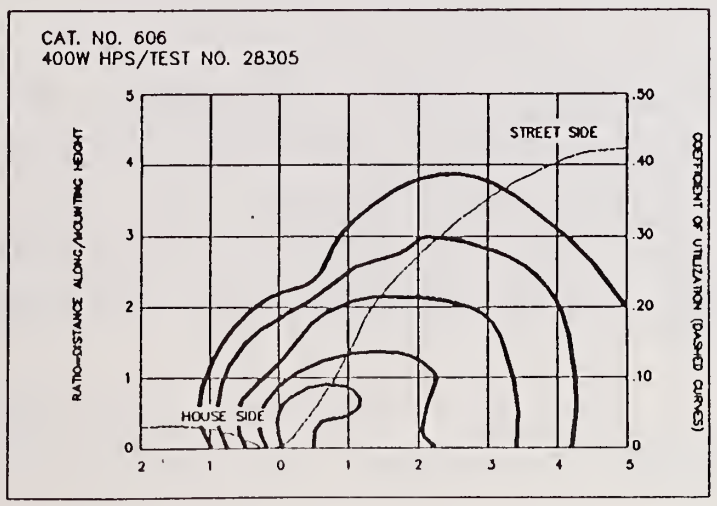
THE LUMINAIRE SHALL CONSIST OF A REAR DIE–CAST BACK HOUSING WHICH ENCLOSES THE BALLAST, LAMP SOCKET, AND ALUMINUM REFLECTOR; AND A THERMAL SHOCK–RESISTANT PRIMASTIC GLASS REFLECTOR. UNITS SHALL BE PREWIRED AND EQUIPPED TO BE WALL MOUNTED (OR POLE) DIRECTLY ON CONDUIT FOR SURFACE WIRING TO CONDUIT OR TO A RECESSED OUTLET BOX, AND SHALL REQUIRE NO TOOLS FOR LAMP REPLACEMENT. THE UNIT SHALL BE U.L. LISTED AS "SUITABLE FOR WET LOCATIONS". PROVIDE FIXTURE WITH PHOTOMETRIC OUTPUT EQUAL TO OR GREATER THAN THE DISTRIBUTION PATTERN SHOWN BELOW.

LAMP VOLTAGE AS SHOWN ON DRAWINGS
BALLAST – REGULATOR

400W HPS LU400/BU

HOLOPHANE

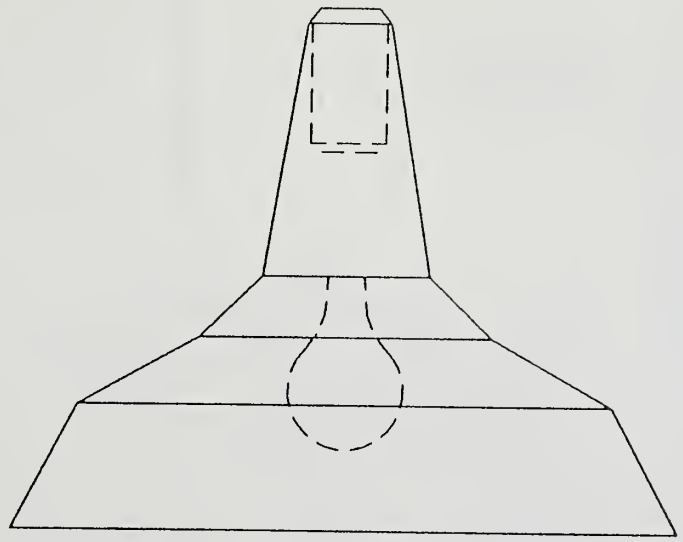
HPS–6



10–24–88

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INDUSTRIAL FIXTURE
TYPE RLM



TYPE	DIAMETER	LAMP
I–14	12"	100 W
I–15	14"	150 W
I–16	16"	200 W
I–17	18"	300 W

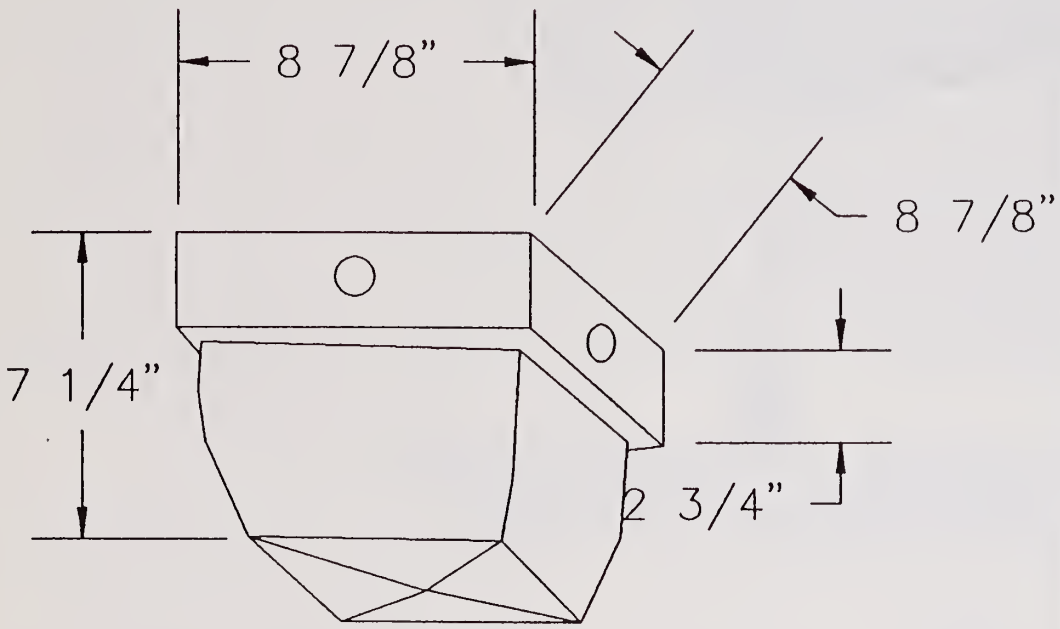
INDUSTRIAL PORCELAIN ENAMELED STEEL, DOME REFLECTOR HAVING A HOOD SUITABLE FOR THE OUTLET FROM WHICH THE FIXTURE IS SUPPORTED. SOCKET SHALL BE KEYLESS UNLESS SPECIFICALLY NOTED OTHERWISE. FIXTURE SHALL BE CEILING MOUNTED EXCEPT WHERE NOTED ON DRAWINGS, IN WHICH CASE THE PENDANT SHALL BE ONE–HALF INCH THREADED CONDUIT. FIXTURE SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF FEDERAL SPECIFICATIONS W–F–412.

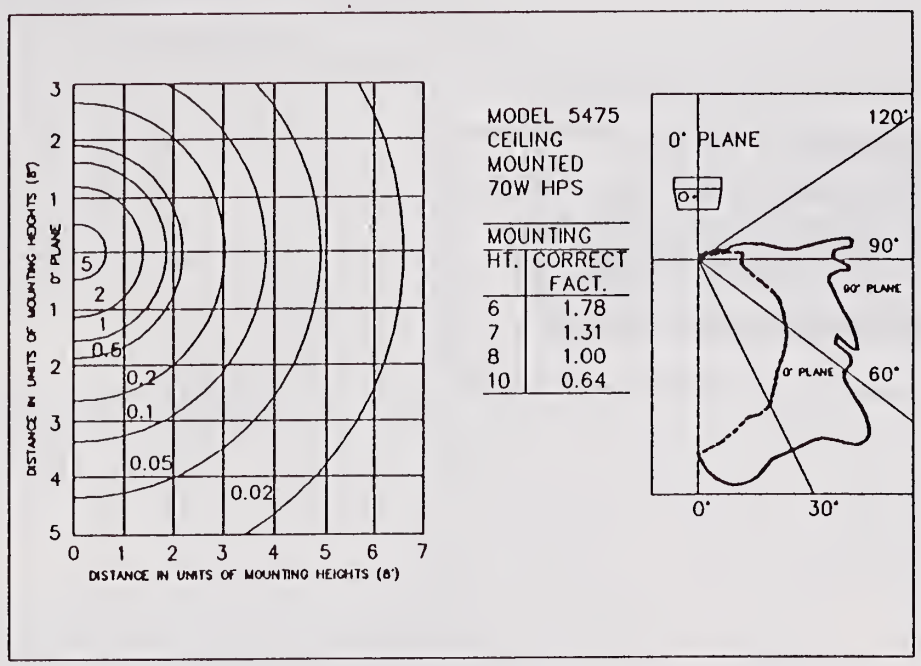
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10–27–88

EFFECTIVE CEILING CAVITY RE			ANCE–PERCENT		
WALL	80	70	50	30	10

EFFECTIVE CEILING CAVITY REFLECTANCE–PERCENT																		
WALL		80				70				50			30			10		
REFLECTANCE		70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
ROOM CAVITY RATIO (RCR)	1	61	58	55	53	52	50	48	46	34	33	32	20	19	18	6	6	6
	2	55	50	47	43	47	43	40	37	30	28	26	17	16	15	5	5	5
	3	50	44	40	36	42	38	34	31	26	24	22	15	14	13	5	4	4
	4	46	39	34	30	39	33	29	26	23	20	18	13	12	11	4	4	4
	5	42	35	29	26	36	30	25	22	20	18	16	12	10	9	4	3	3
	6	38	31	26	22	33	26	22	19	18	15	13	11	9	8	3	3	3
	7	35	28	22	19	30	24	19	16	16	14	12	9	8	7	3	3	2
	8	33	25	20	16	28	21	17	14	15	12	10	9	7	6	3	2	2
	9	30	21	18	14	26	19	15	13	13	11	9	8	6	5	3	2	2
	10	28	20	16	13	24	18	14	11	12	10	8	7	6	5	2	2	2



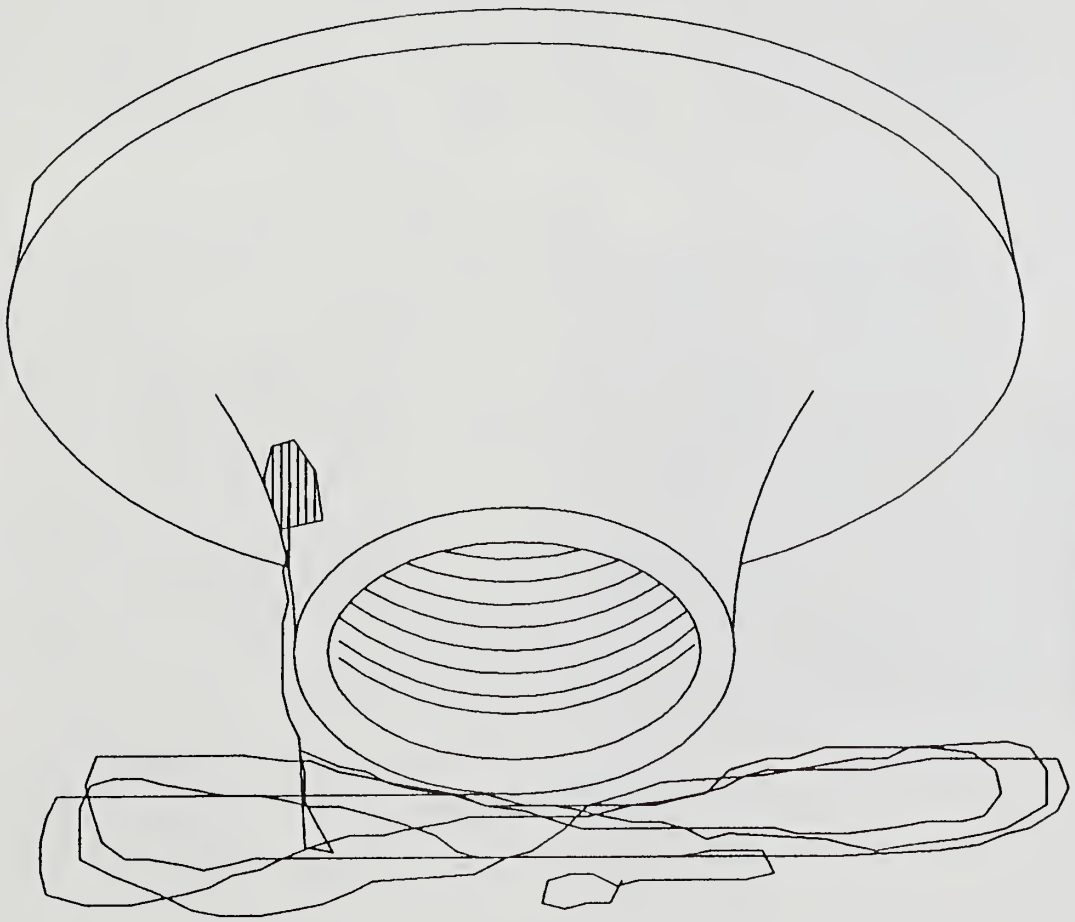


THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

THE LUMINAIRE SHALL CONSIST OF AN 18 GAUGE COLD ROLLED STEEL HOUSING, SEAM WELDED FOR WEATHER PROOF SEAL AND HAVE A BAKED ENAMEL FINISH. DIFFUSER SHALL BE AN INDESTRUCTIBLE CLEAR PRISMATIC LENS AND REFLECTOR SHALL BE ANODIZED ALUMINUM. UNIT SHALL ALSO INCLUDE ONE HIGH PRESSURE SODIUM BALLAST. HARDWARE SHALL INCLUDE TAMPERPROOF SCREW.

BALLAST 70W HPF–VOLTAGE 10–30–88
AS SHOWN ON DRAWINGS HPS–15 70W HPS, LU70/D/MED

PORCELAIN BASE WITH O ET

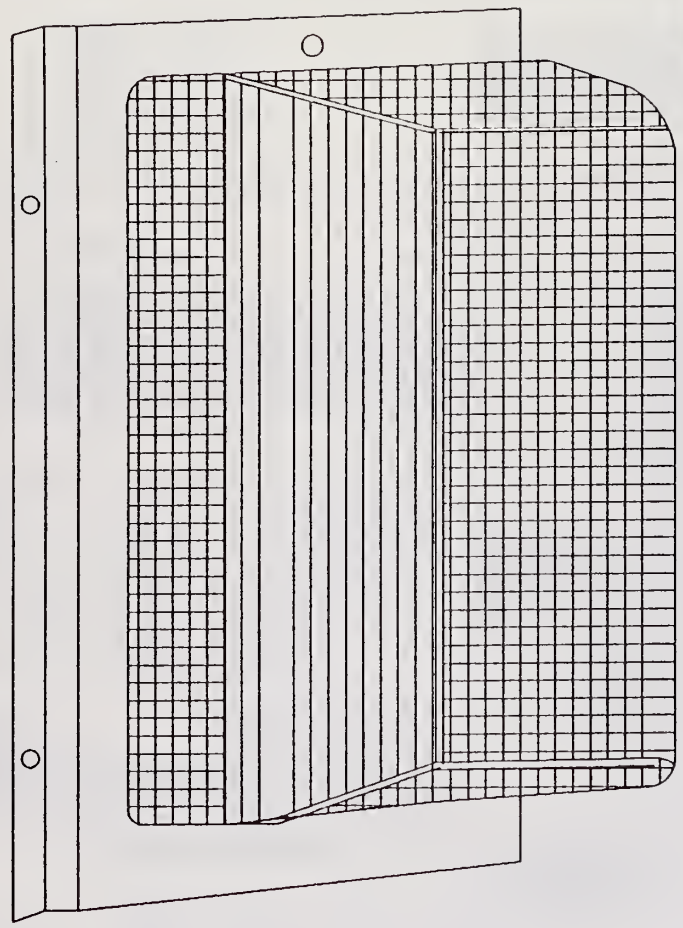


THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

PORCELAIN PULL RECEPTACLE WITH CONVENIENCE OUTLET AND SHADE HOLDER GROOVE. BASE DIAMETER 4 1/2". SHALL FIT EITHER 3 1/4" OR 4" OUTLET BOX. LAMP RECEPTACLE 250 WATTS, 125 V. OUTLET 15 AMPS., 125 V. FIXTURE SHALL BEAR UL LABEL.

FIXTURES SWITCHED SHALL BE LESS PULL CHAIN.

LAMP	10-27-8 I-13	1 - 100 W.



THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

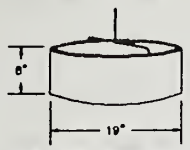
VANDALPROOF INTERIOR/EXTERIOR WALL MOUNTED INCANDESCENT FIXTURE

WALL MOUNTING BRACKET SHALL BE CONSTRUCTED OF 14 GAUGE STEEL AND SHALL BE FURNISHED WITH STANDARD SCREWS FOR INTERIOR MOUNTING AND TAMPER-PROOF SCREWS AND SPECIAL SCREW DRIVER FOR EXTERIOR MOUNTING. FIXTURE SHALL BE EQUIPPED WITH CLEAR, PRIMASTIC, UNBREAKABLE DIFFUSER, AND NEOPRENE MOISTURE-PROOF GASKET, AND SHALL BE UL APPROVED. FURNISH WITH FACTORY BACK MOUNTING BOX, IF SURFACE MOUNTED.

LAMP	I-23 10-27-88	1 - 100 A-19

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

SYMMETRIC TYPE V



EFFECTIVE CEILING CAVITY REFLECTANCE-PERCENT

WALL REFLECTANCE	80			70			50			30			10
CEILING CAVITY REFLECTANCE	70	50	30	70	50	30	50	30	10	50	30	10	50
1	81	58	40	81	58	40	58	40	28	58	40	28	58
2	73	53	37	73	53	37	53	37	26	53	37	26	53
3	66	48	34	66	48	34	48	34	24	48	34	24	48
4	60	44	31	60	44	31	44	31	22	44	31	22	44
5	55	40	28	55	40	28	40	28	20	40	28	20	40
6	50	36	26	50	36	26	37	26	19	37	26	19	37
7	46	33	24	46	33	24	34	24	17	34	24	17	34
8	42	30	22	42	30	22	31	22	16	31	22	16	31
9	39	28	20	39	28	20	29	20	15	29	20	15	29
10	36	26	19	36	26	19	27	19	14	27	19	14	27

PENDANT MOUNT SYMMETRIC METAL HOUSING HALIDE LUMINAIRE WITH REMOTE BALLAST

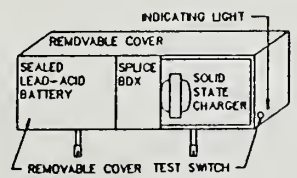
METAL HALIDE FIXTURE TO HAVE REMOTE HIGH POWER FACTOR BALLAST AND LUMINAIRE HOUSING TO BE ONE-PIECE SEAMLESS SPUN STEEL WITH SEALED OPTICAL CHAMBER. VOLTAGE TO BE AS SHOWN ON DRAWINGS THE FIXTURE LENS TO BE THERMAL AND IMPACT RESISTANT GLASS. REFLECTOR TO BE HYDRO-FORMED ALUMINUM. GASKET WILL BE MADE OF OF EDM MATERIAL AND PAINT TO BE ELECTRDSTATICALLY APPLIED BAKED ACRYLIC FINISH. EACH UNIT SHALL BE COMPLETELY WIRED AND EQUIPPED WITH ALL EQUIPMENT NEEDED FOR MOUNTING AND OPERATION.

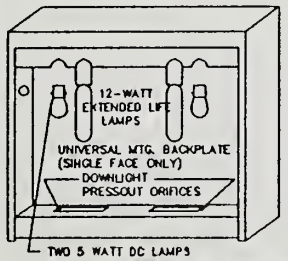
THE COEFFECIENT OF UTILIZATION SHALL NOT BE LESS THAN .40 BASED ON A CEILING REFLECTANCE OF 70 PERCENT, WALL REFLECTANCE OF 30 PERCENT, FLOOR REFLECTANCE 20 PERCENT, AND A ROOM CAVITY RATIO OF 2.

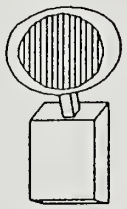
FIXTURE SUPPORT STEM TO BE STEEL 1/2" OD AND CHROME-PLATED. FIXTURE TO BE STERNER/INLITE SERIES NO. AT 60 OR APPROVED EQUAL. VOLTAGE AS SHOWN ON DRAWINGS.

LAMP 1-400 WATT METAL NALIDE
BALLAST MH-1D 400 WATT M.H., H.P.F.
10-24-88

EXIT AND REMOTE EMERGENCY LIGHT







REMOTE LITE PACK

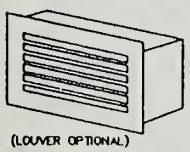


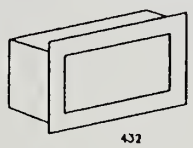
LINE VOLTAGE AND BATTERY POWER EXIT AND REMOTE EMERGENCY LIGHT

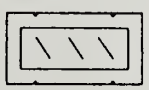
EXIT FIXTURE SHALL HAVE A DIE-CAST ALUMINUM FRAME AND CANOPY AND COLOR TO BE WHITE ENAMEL END CAPS AND MATTE BLACK HOUSING. FACE SHALL BE PLASTIC WITH 6" GREEN LETTERS. POWER PACK SHALL BE TAMPER PROOF, PROVIDE SOLID STATE CHARGER, SEALED LEAD-ACID GEL TYPE BATTERY, TWO 12 WATT AC LAMPS AND TWO 5 WATT DC LAMPS, INDICATING LIGHT, AND TEST SWITCH. DIMENSIONS SHALL BE APPROXIMATELY 2 3/8" THICK X 12 1/4" HIGH X 10 5/8" WIDE AND BRACKET HANGER DEVICE SHALL BE SUITABLE FOR TOP, END OR BACK MOUNTING.

REMOTE LIGHT PACK SHALL BE CONSTRUCTED OF MOLDED ABS WITH BACK PLATE OF STEEL, 8 V SEALED LEAD-ACID RECHARGEABLE GEL TYPE BATTERY AND 18 WATT LAMP. THIS UNIT IS POWERED BY THE EXIT POWER PACK CHARGER AND PROVIDES APPROXIMATELY 1 1/2" HOURS OF EMERGENCY LIGHTING.

LAMPS TWO 12 WATT AC LAMPS
TWO 5 WATT DC LAMPS
ONE 18 WATT DC LAMPS
I-37
10-21-88


(LOUVER OPTIONAL)


432



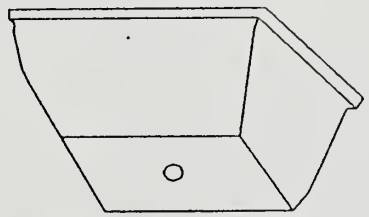


STEP LIGHT
HEAVY DUTY CAST ALUMINUM WITH GASKET LOUVERED GUARD. FIXTURE HAS TEMPERED GLASS DIFFUSER AND 3/4" NPT HUB IN BOTH ENDS FOR FLEXIBLE INSTALLATION.

FIXTURE SHALL BE WEATHER RE[illegible]D 120V A.C. WITH ONE 100W MAX LAMP. USE HUBBEL CATA[illegible]432 OR APPROVED EQUAL.

EFFECTIVE CEILING CAVITY REFLECTANCE-PERCENT

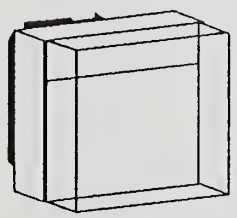
WALL REFLECTANCE	80			70			50			30			10
CEILING CAVITY REFLECTANCE	70	50	30	70	50	30	50	30	10	50	30	10	50
1	81	58	40	81	58	40	58	40	28	58	40	28	58
2	73	53	37	73	53	37	53	37	26	53	37	26	53
3	66	48	34	66	48	34	48	34	24	48	34	24	48
4	60	44	31	60	44	31	44	31	22	44	31	22	44
5	55	40	28	55	40	28	40	28	20	40	28	20	40
6	50	36	26	50	36	26	37	26	19	37	26	19	37
7	46	33	24	46	33	24	34	24	17	34	24	17	34
8	42	30	22	42	30	22	31	22	16	31	22	16	31
9	39	28	20	39	28	20	29	20	15	29	20	15	29
10	36	26	19	36	26	19	27	19	14	27	19	14	27



VANDALPROOF INTERIOR/EXTERIOR CEILING MOUNTED INCANDESCENT FIXTURE

CEILING MOUNTING BRACKET SHALL BE CONSTRUCTED OF 14 GAUGE STEEL AND SHALL BE FURNISHED WITH TAMPERPROOF SCREWS AND SPECIAL SCREW DRIVER FOR MOUNTING. FIXTURE SHALL BE EQUIPPED WITH TRANSLUCENT, UNBREAKABLE PLASTIC DIFFUSER, AND NEOPRENE MOISTUREPROOF GASKET, AND SHALL BE U.L. APPROVED FOR CEILING SURFACE MOUNTING.

LAMP I-24 1-100W A-19
10-21-88

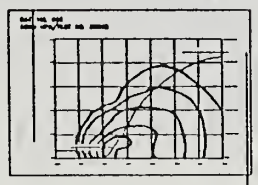


HPS - LUMINAIRE

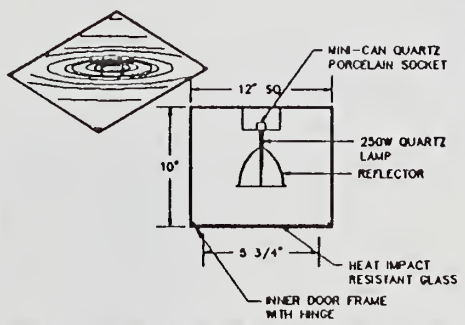
THE LUMINAIRE SHALL CONSIST OF A REAR DIE-CAST BACK HOUSING WHICH ENCLOSES THE BALLAST, LAMP SOCKET, AND ALUMINUM REFLECTOR; AND A THERMAL SHOCK-RESISTANT PRISMATIC GLASS REFLECTOR. UNITS SHALL BE PREWIRED AND EQUIPPED TO BE WALL MOUNTED (OR POLE) DIRECTLY ON CONDUIT FOR SURFACE WIRING TO CONDUIT OR TO A RECESSED OUTLET BOX, AND SHALL REQUIRE NO TOOLS FOR LAMP REPLACEMENT. THE UNIT SHALL BE U.L. LISTED AS "SUITABLE FOR WET LOCATIONS". PROVIDE FIXTURE WITH PHOTOMETRIC OUTPUT EQUAL TO OR GREATER THAN THE DISTRIBUTION PATTERN SHOWN BELOW.

LAMP VOLTAGE AS SHOWN ON DRAWINGS 400W HPS LU400/BU
BALLAST - REGULATOR

HOLOPHANE
HPS-8

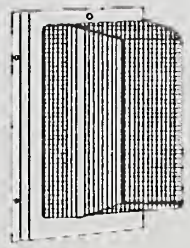


10-21-88



FIXTURE HOUSIND SHALL BE CONSTRUCTED OF A MINIMUM OF 20 GAUGE COLD ROLLED STEEL AND FINISHED IN WHITE BAKED ENAMEL. LAMP SOCKET SHALL BE A MINI-CAN QUARTZ PORCELAIN SOCKET. MOUNTIND SHALL BE PLASTER FRAME AND HANGER ASSEMBLY. THE APPROXIMATE DIMENSIONS OF THE FIXTURE SHALL BE 10" DEEP AND 12" SQUARE. FIXTURE SHALL BEAR THE U.L. LABEL.

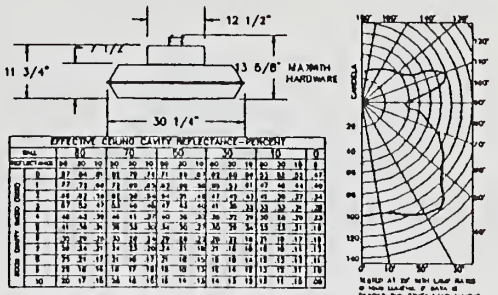
LAMP I-36 1-260 QUARTZ
10-28-88



VANDALPROOF INTERIOR/EXTERIOR WALL MOUNTED INCANDESCENT FIXTURE

WALL MOUNTING BRACKET SHALL BE CONSTRUCTED OF 14 GAUGE STEEL AND SHALL BE FURNISHED WITH STANDARD SCREWS FOR INTERIOR MOUNTING AND TAMPER-PROOF SCREWS AND SPECIAL SCREW DRIVER FOR EXTERIOR MOUNTING. FIXTURE SHALL BE EQUIPPED WITH CLEAR, PRISMASTIC, UNBREAKABLE DIFFUSER, A[illegible]PRENE MOISTURE-PROOF GASKET, AND SHALL BE UL APPROV[illegible] WITH FACTORY BACK MOUNTING BOX. IF SURFACE MOUN[illegible]

LAMP I-[illegible] 1 - 100 A-19
10-2[illegible]



EFFECTIVE CEILING CAVITY REFLECTANCE-PERCENT

WALL REFLECTANCE	80			70			50			30			10	0
CEILING CAVITY REFLECTANCE	70	50	30	70	50	30	50	30	10	50	30	10	50	
1	81	58	40	81	58	40	58	40	28	58	40	28	58	68
2	73	53	37	73	53	37	53	37	26	53	37	26	53	60
3	66	48	34	66	48	34	48	34	24	48	34	24	48	53
4	60	44	31	60	44	31	44	31	22	44	31	22	44	47
5	55	40	28	55	40	28	40	28	20	40	28	20	40	42
6	50	36	26	50	36	26	37	26	19	37	26	19	37	38
7	46	33	24	46	33	24	34	24	17	34	24	17	34	34
8	42	30	22	42	30	22	31	22	16	31	22	16	31	31
9	39	28	20	39	28	20	29	20	15	29	20	15	29	28
10	36	26	19	36	26	19	27	19	14	27	19	14	27	26

HPS-21 250 WATT HIGH PRESSURE SODIUM LUMINAIRE

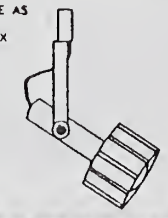
FIXTURE SHALL HAVE DURABLE ALUMINUM BALLAST HOUSING WITH ELECTRO-COAT GRAY FINISH, UV STABILIZED INJECTION MOLDED ACRYLIC REFLECTOR FOR LOW BRIGHTNESS, PRIMARY QUICK DISCONNECT PLUG AND BALLAST SAFETY CHAIN PROVISIONS.

LUMINAIRE SHALL BE ABLE TO BE CEILING MOUNTED OR PENDANT HUNG AND HAVE INSTANDT ON AND OFF QUARTZ SAFETY LIGHTING AS SHOWN ON DRAWINGS.

THE COEFFICIENT OF UTILIZATION SHALL BE NOT LESS THAN .47 BASED ON CEILING REFLECTANCE OF 50%, WALL REFLECTANCE OF 30%, FLOOR REFLECTANCE OF 20% AND A ROOM CAVITY RATIO OF 3.

PROVIDE G.E. VERSAGLOW 250W FIXTURE AS APPROVEDEQUAL, WITH VOLTAGE AS SHOWN ON DRAWINGS.

LAMP (1) 250W LUCALOX
BALLAST HPS-21 REGULATOR
10-24-88

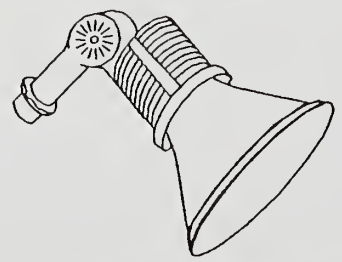


TRACK-LIGHT CEILING CYLINDER

ADJUSTABLE CYLINDER SHALL BE BLACK AND BRUSHED ALUMINUM. FIXTURE SHALL BE EQUIPPED WITH PORCELAIN SOCKET, TRACK MOUNTING ADAPTER, AND BE U.L. APPROVED FOR SURFACE AND RECESSED, LIGHT TRACK MOUNTIND. OVERALL LENGTH SHALL BE APPROXIMATELY 8 1/2", DIAMETER APPROXIMATELY 4 1/8"

LAMP I-26 1-75W R30 FLOOD
10-24-88

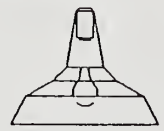
WAEATHERPROOF LAMPHOLDER



THE FIXTURE SHALL BE DIE-CAST ALUMINUM, WEATHERSPROOFED TO PROTECT THE LAMP BASE AND WIRING AREA. THERE SHALL BE SUFFICIENT EXERNALLY CAST RIBS FOR HEAT DISSIPATION. WEATHERPROOFING SHALL BE BY MEANS OF A LOCKED-IN-PLACE SILICONE RUBBER DIAPHRAM WHICH FIRMLY COMPRESSES ADAINST THE NECK OF THE LAMP TO PREVENT MOISTURE FROM ENTERING THE SOCKET AND WIRE AREA. THE SOCKET SHALL BE GLAZED HEAT-PROOF PORCELAIN WITH A COPPER NICKEL PLATED SCREW SHELL HAVING A SPRING-LOADED NICKEL PLATED CENTER TAB. THE WIRE LEADS SHALL BE UNSPLICED UL APPROVED OUT-DOOR WIRE WITH 9" EXCESS FOR LATER CONNECTION. THE SWIVEL ARM SHALL BE CAST ALUMINUM WITH INTERLOCKING TEETH FOR POSITIVE LOCKING AND CALIBRATED FOR 180 DEGREES. ALL HARDWARE SHALL BE EXTRA HEAVY PLATED. THE FIXTURE SHALL BEAR THE UL AND/OR C.S.A. LABEL. THE FIXTURE SHALL BE COMPLETE WITH BOX COVER FOR SINGLE ARM, AND FIXTURE NO 10. REQUIRES BOX COVER FOR DOUBLE ARM.

LAMPS I-9 1 - 150W PAR 38
I-10 1 - 150W PAR 38
10-25-88

INDUSTRIAL FIXTURE TYPE RLM

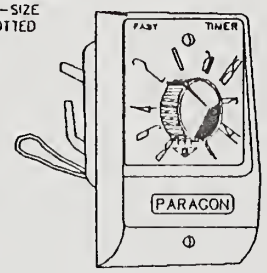


TYPE	DIAMETER	LAMP
I-14	12"	100 W
I-15	14"	150 W
I-16	16"	200 W
I-17	18"	300 W

INDUSTRIAL PORCELAIN ENAMELED STEEL DOME REFLECTOR HAVING A HOOD SUITABLE FOR THE OUTLET FROM WHICH THE FIXTURE IS SUPPORTED. SOCKET SHALL BE KEYLESS UNLESS SPECIFICALLY NOTED OTHERWISE. FIXTURE SHALL BE CEILING MOUNTED EXCEPT WHERE NOTED ON DRAWINGS, IN WHICH CASE THE PENDANT SHALL BE ONE-HALF INCH THREADED CONDUIT. FIXTURE SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF FEDERAL SPECIFICATIONS W-F-412.

10-24-88

ALL BLOCKS IN THIS DRAWING WERE INSERTED 1 TO 1. THE D-SIZE DWG. WAS PLOTTED 1 TO 1.

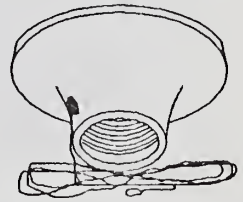


FLUSH MOUNTED INTERVAL TIMER

THE TIMER SHALL BE 120V WITH 1800 WATT CAPACITY AND HAVE A DIAL RANGE FROM 0-15 MINUTES. TIMER SHALL BE UL APPROVED. DIAL GRADUATIONS 1/2 MINUTES.

TS-1
10-24-88

PORCELAIN BASE WITH OUTLET

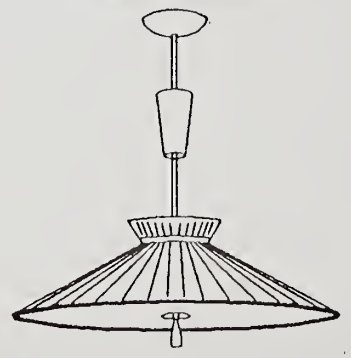


PORCELAIN PULL RECEPTACLE WITH CONVENIENCE OUTLET AND SHADE HOLDER GROOVE. BASE DIAMETER 4 1/2", SHALL FIT EITHER 3 1/4" OR 4" OUTLET BOX. LAMP RECEPTACLE 250 WATTS, 125 V. OUTLET 15 AMPS., 125 V. FIXTURE SHALL BEAR UL LABEL.

FIXTURES SWITCHED SHALL BE LESS PULL CHAIN.

LAMP 1 - 100 W.
I-13
10-24-88

CEILING PULL DOWN FIXTURE



FIXTURE SHALL BE OUTLET BOX MOUNTED. MINIMUM SHADE DIAMETER SHALL BE 18". SHADE SHALL BE OF NATURAL FINISH ASPEN OR WALNUT AND FIBERGLASS. TRIM SHALL BE POLISHED BRASS. PULLDOWN RANGE SHALL BE FROM 20" MINIMUM TO 44"-54" RANGE MAXIMUM SUSPENSION. FIXTURE SHALL BE EQUIPPED WITH THREE-WAY SWITCH. FIXTURE SHALL BEAR UL LABEL.

LAMP I-8 3 - 60W
10-24-88

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

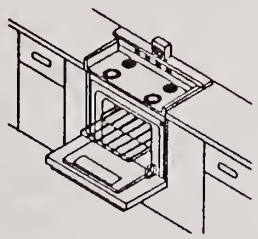
ELECTRICAL CUT SHEETS

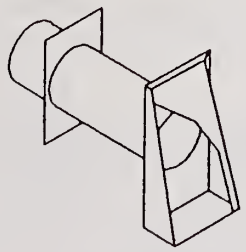
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DESIGNED DATE
CHECKED DATE
REVIEWED DATE

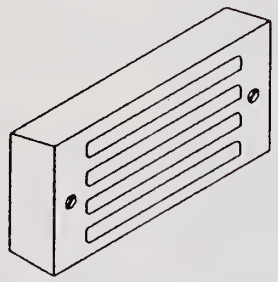
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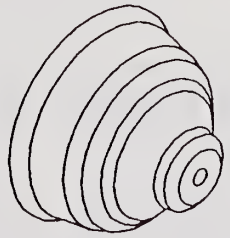
SHT 4
OF 10

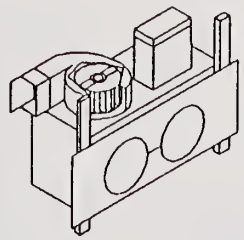
THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

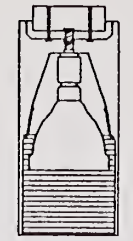


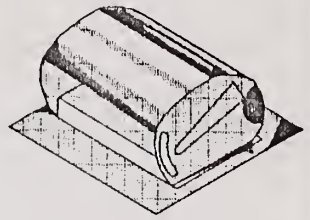


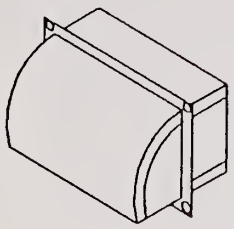


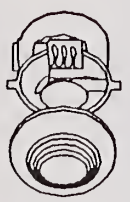


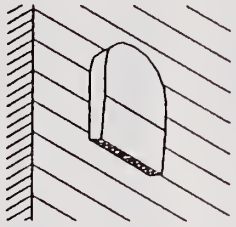


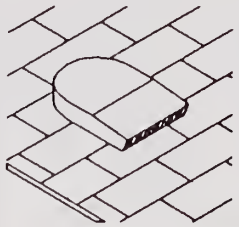


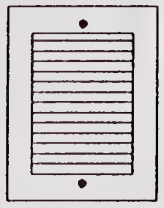




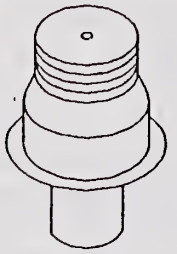


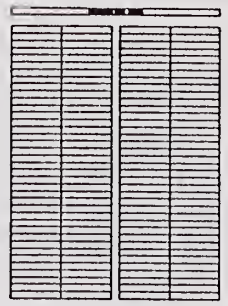


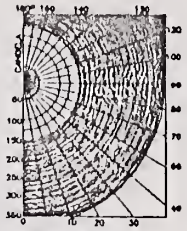


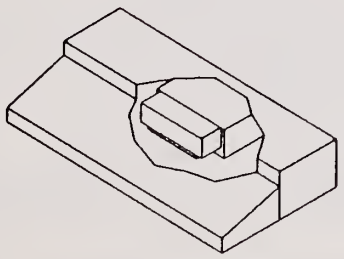


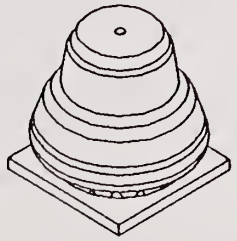


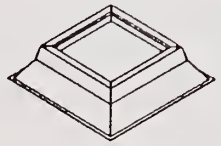


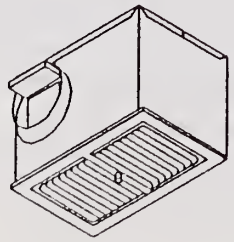


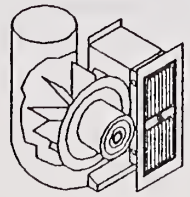








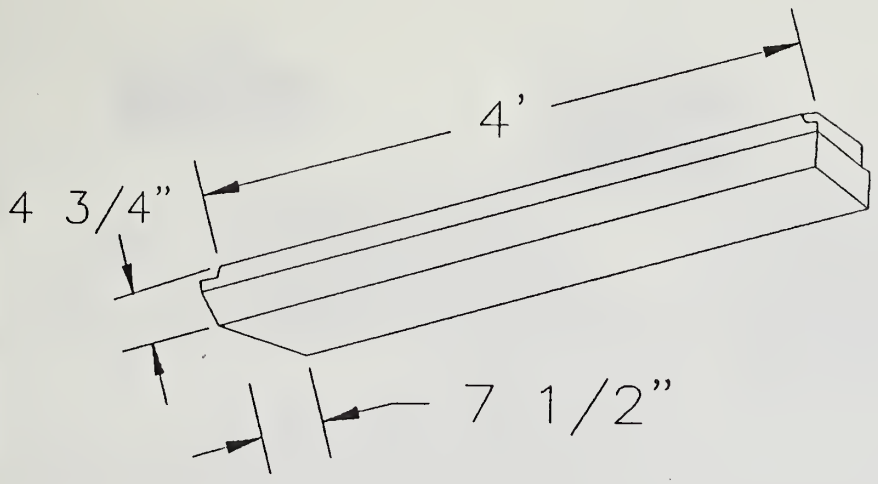




ALL BLOCKS IN THIS DRAWING WERE INSERTED AT 1 TO 1. AND THE "D" SIZE DRAWING WAS PLOTTED AT 1 TO 1.

EFXCS001 12-28-88

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE THE PACIFIC NORTHWEST REGION		ELECTRICAL FIXTURE CUT SHEET	
	DRAWN DSH DATE 12-28-88 DESIGNED DATE CHECKED DATE REVIEWED DATE	EXFCS001	SHT 1 OF 1



COEFFICIENTS OF UTILIZATION						
ZONAL CAVITY METHOD						
2 LAMP						
pfc	20					
pcc	70		50		10	
pw	30	10	30	10	30	10	30
PCR						
1	.67	.64	.62	.60	.55	.54
2	.55	.51	.52	.49	.47	.44
3	.47	.43	.45	.41	.40	.37
4	.41	.36	.39	.35	.35	.32
5	.35	.30	.33	.29	.25	.27
6	.31	.26	.29	.25	.27	.23
7	.27	.23	.26	.22	.24	.20
8	.24	.20	.23	.19	.21	.18
9	.21	.17	.20	.16	.18	.15
10	.19	.15	.18	.15	.16	.14

CANDLEPOWER DISTRIBUTION CURVE			
2 LAMP			
ANGLE	END	45°	CROSS
5	1200.	1200.	1200.
15	1155.	1170.	1192.
25	1020.	1060.	1120.
35	850.	935.	1020.
45	690.	810.	930.
55	520.	680.	830.
65	345.	540.	715.
75	185.	390.	585.
85	60.	250.	435.
95	30.	190.	345.
105	22.	141.	275.
115	20.	90.	188.
125	16.	45.	105.
135	15.	22.	52.
145	15.	15.	25.
155	12.	10.	12.
165	0.	0.	0.
175	0.	0.	0.

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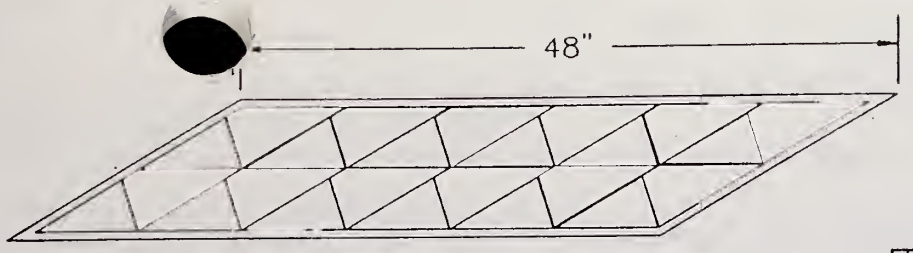
2 TUBE LUMINAIRE (SUITABLE FOR WET LOCATIONS)

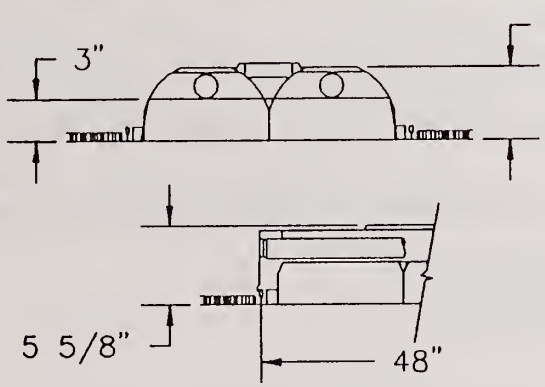
THE LUMINAIRE SHALL BE COMMERCIAL TYPE WITH ONE PIECE INJECTION MOULDED HIGH IMPACT THERMOPLASTIC OR FIBERGLASS BODY WITH INTERNAL METAL WIRING COMPARTMENT, TREATED WITH A FIVE-STAGE COATING OF ZINC PHOSPHATE AND FINISHED IN HOT BONDED BAKED ENAMEL. FIXTURE SHALL ALSO HAVE THREADED SEAL FITTINGS AT TOP AND ENDS FOR MOUNTING AND ELECTRICAL FEED.

DIFFUSER SHALL BE HIGH IMPACT ACRYLIC, NOMINAL THICKNESS OF .103 INCH WITH CONTINUOUS COMPRESSIBLE NEOPRENE GASKET TO PROVIDE SEAL BETWEEN DIFFUSER AND FIXTURE BODY.

THE COEFFICIENT OF UTILIZATION SHALL NOT BE LESS THAN .33 BASED ON A CEILING REFLECTANCE OF 50%, A WALL REFLECTANCE OF 30%, A FLOOR REFLECTANCE OF 20% , AND A ROOM CAVITY OF 5. EACH UNIT SHALL BE COMPLETELY WIRED AND EQUIPPED WITH ALL AUXILIARIES. BALLAST SHALL BE HPF, ETL, 430 MA WITH U.L. AND C.B.M. LABELS. DAYBRITE VAPORLUME OR APPROVED EQUAL.

LAMPS 2-4-FOOT-F40 T12 CW
BALLAST F-30 RID START
VOLTAGE AS SHOWN ON DRAWINGS





COEFFICIENTS OF UTILIZATION

EFFECTIVE FLOOR CAVITY REFLECTANCE = .20

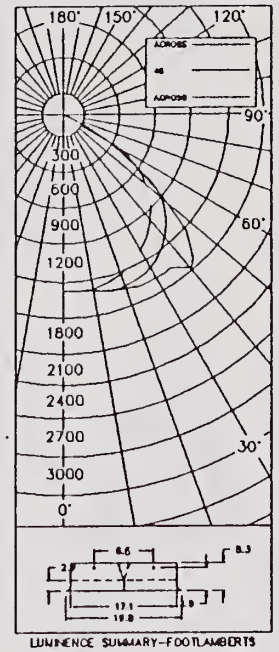
CC	80	70	50	30	10	0
WALL	70 50 30 10	70 50 30 10	50 30 10	50 30 10	50 30 10	0
1	.79 .76 .74 .72	.77 .75 .73 .71	.72 .70 .68	.69 .68 .66	.66 .65 .64	.63
2	.73 .69 .65 .62	.72 .67 .64 .61	.65 .62 .60	.63 .60 .58	.61 .59 .57	.56
3	.68 .62 .57 .53	.66 .61 .56 .53	.59 .55 .52	.57 .54 .51	.55 .53 .50	.49
4	.63 .55 .50 .46	.61 .55 .50 .46	.53 .49 .45	.51 .48 .45	.50 .47 .44	.43
5	.58 .50 .44 .40	.56 .49 .43 .39	.47 .43 .39	.46 .42 .39	.45 .41 .38	.37
6	.53 .44 .39 .35	.52 .44 .38 .34	.42 .38 .34	.41 .37 .34	.40 .36 .33	.32
7	.49 .40 .34 .30	.48 .39 .34 .30	.38 .33 .30	.37 .33 .29	.36 .32 .29	.28
8	.45 .35 .30 .26	.44 .35 .30 .26	.34 .29 .26	.33 .29 .25	.32 .28 .25	.24
9	.41 .32 .26 .22	.40 .31 .26 .22	.30 .25 .22	.30 .25 .22	.29 .25 .22	.20
10	.38 .29 .23 .19	.37 .28 .23 .19	.28 .23 .19	.27 .22 .19	.26 .22 .19	.18

ROOM CAVITY RATIO

LIGHTING SCIENCES INC.

7830 E EVANS RD. SCOTTSDALE, AZ. 85260 602-991-9260

CERTIFIED TEST REPORT NO. 2798 COMPUTED BY LSI PROGRAM **TEST-LITE**
GLOBE 20 IN. X 4 FT. RECESSED TROFFER, CAT NO. ALP9032-4R-05-12
12 CELL SEMI-SPECULAR LOUVER, ADVANCE BALLAST #R-240-TP
TWO F40LW/RS/WM FLOURESCENT LAMPS. LUMEN RATING = 3050 LMS.



LUMINENCE SUMMARY-FOOTLAMBERTS

ANGLE	ACROSS	45	ALONG
45	2023	1862	1752
55	1434	1622	1556
65	561	675	843
75	144	136	117
85	65	75	85

TESTED IN ACCORDANCE WITH IES PROCEDURES. TEST DISTANCE = 8 METERS (26')

CANDLEPOWER SUMMARY

ANGLE	ACROSS	67.5	45	22.5	ALONG	OUTPUT LUMENS
0	1616	1616	1616	1616	1616	
5	1625	1622	1815	1813	1610	154
10	1644	1639	1612	1592	1564	
15	1652	1639	1600	1559	1540	452
20	1654	1631	1572	1517	1488	
25	1670	1626	1536	1468	1423	714
30	1665	1616	1502	1407	1348	
35	1661	1584	1461	1335	1261	921
40	1753	1608	1400	1251	1159	
45	1579	1543	1324	1153	1043	1012
50	1167	1225	1220	1033	908	
55	652	739	944	866	741	733
60	397	406	575	620	527	
65	238	232	252	294	215	272
70	85	93	91	62	49	
75	35	35	32	31	27	42
80	16	16	18	17	15	
85	6	7	6	7	8	8
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

0-30	1320	21.65	30.85
0-40	2240	36.74	62.02
0-60	3988	65.34	92.52
0-90	4306	70.83	100.00
40-90	2067	33.69	47.98
60-90	322	5.26	7.48
90-180	0	0.00	0.00
0-180	4308	70.63	100.00

** EFFICIENCY = 70.63% **

PAINT REFLECTANCE = .88 2/3RH = 1.8
SC(ALONG) = 1.2, SC(ACROSS) = 1.6
CERTIFIED BY:
JON LEWIS DATE
OCT 28, 1982
PREPARED FOR:
GLOBE ILLUMINATION
GARDENA, CA.
SHIELDING ANGLE: 35° C -23° L

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

2 TUBE PARABOLIC TYPE LUMINARE

APPROVED FOR RECESSED MOUNTING

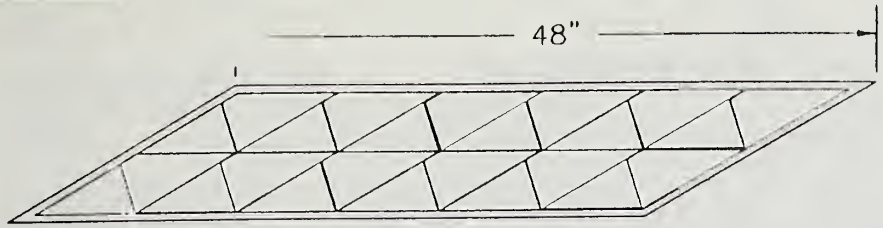
THE LUMINARE SHALL BE COMMERCIAL TYPE WITH CODE GAUGE STEEL, RIGIDIZED BY FULL LENGTH DIE EMBOSSING.

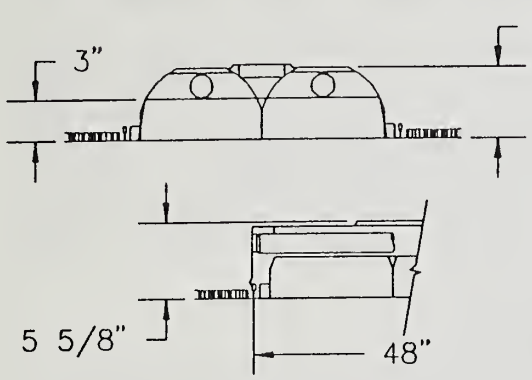
LOUVER ASSEMBLY TO BE PROVIDED WITH SELF-ALIGNING SPRING LOADED TRIGGER LATCHES AND HEAVY GUAGE STEEL HINGES WHICH ALLOW HINGING FROM EITHER SIDE. PAINTED METAL PARTS ARE PRIMED WITH A COATING OF IRON PHOSPHATE. REGRESS AREA IS PAINTED MATTE BLACK ENAMEL, LOUVERS ARE TO BE PRE-ANODIZED SEMI-SPECULAR ALUMINUM.

THE COEFFICIENT OF UTILIZATION SHALL NOT BE LESS THAN .43 BASED ON A CEILING REFLECTANCE OF 50 PERCENT, WALL REFLECTANCE OF 30 PERCENT, FLOOR REFLECTANCE OF 20 PERCENT, AND A ROOM CAVITY RATIO OF 5.

BALLAST SHALL BE ENERGY SAVING, HPF, ETL, 430MA WITH U.L. AND C.B.M. LABELS.
VOLTAGE TO BE SHOWN ON DRAWINGS.
FIXTURE TO BE GLOBE CAT NO. ALP9032-4R-02-12 OR APPROVED EQUAL.

LAMP	F-40	2-4 FOOT-F-40 T12 CW
BALLAST		RAPID START

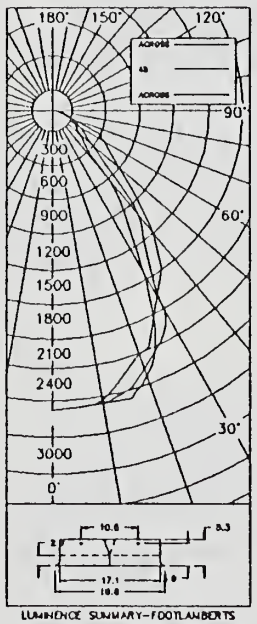




LIGHTING SCIENCES INC.

7830 E. EVANS RD. SCOTTSDALE, AZ. 85260 602-991-9260

CERTIFIED TEST REPORT NO. 2796 COMPUTED BY LSI PROGRAM "TEST-LITE"
GLOBE 20 IN. X 4 FT. RECESSED TROFFER, CAT NO. ALP9032-4R-05-12
12 CELL SEMI-SPECULAR LOUVER, ADVANCE BALLAST #R-240-TP
TWO F40W/RS/WHI FLOURESCENT LAMPS LUMEN RATING = 3050 LMS



LUMINENCE SUMMARY-FOOTLAMBERTS

ANGLE	ACROSS	45	ALONG
45	2023	1982	1752
55	1434	1622	1558
65	561	675	643
75	144	136	117
85	85	75	85

TESTED IN ACCORDANCE WITH IES PROCEDURES. TEST DISTANCE = 8 METERS (26')

CANDLEPOWER SUMMARY

ANGLE	ACROSS	67.5	45	22.5	ALONG	OUTPUT LUMENS
0	1616	1616	1616	1616	1616	
5	1625	1622	1615	1613	1610	164
10	1644	1639	1612	1592	1584	
15	1652	1639	1600	1559	1540	452
20	1654	1631	1572	1517	1488	
25	1670	1626	1538	1468	1423	714
30	1665	1616	1502	1407	1348	
35	1681	1584	1461	1335	1261	921
40	1753	1805	1400	1251	1159	
45	1579	1543	1324	1153	1043	1012
50	1187	1225	1220	1033	906	
55	852	739	944	868	741	733
60	397	406	575	620	527	
65	236	232	252	294	215	272
70	85	93	91	82	49	
75	35	35	32	31	27	42
80	18	18	18	17	15	
85	8	7	6	7	8	8
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

0-30	1320	21.65	30.65
0-40	2240	36.74	52.02
0-60	3988	65.34	92.52
0-90	4308	70.63	100.00
40-90	2067	33.89	47.98
60-90	322	5.28	7.48
90-180	0	0.00	0.00
0-180	4308	70.63	100.00

** EFFICIENCY = 70.63% **

PAINT REFLECTANCE = .88 2/MH = 1.8
SC(ALONG) = 1.2, SC(ACROSS) = 1.8
CERTIFIED BY:
JON LEWIS DATE
OCT 26, 1982
PREPARED FOR:
GLOBE ILLUMINATION
CARDENA, CA.
SHIELDING ANGLE: 35° C -23° L

COEFFICIENTS OF UTILIZATION

EFFECTIVE FLOOR CAVITY REFLECTANCE = .20

CC	80	70	50	30	10	0
WALL	70 50 30 10	70 50 30 10	50 30 10	50 30 10	50 30 10	0
1	.69 .67 .65 .64	.68 .66 .64 .62	.63 .62 .61	.61 .60 .59	.59 .58 .57	.56
2	.65 .61 .58 .55	.63 .60 .57 .55	.58 .56 .54	.56 .54 .52	.54 .53 .51	.50
3	.60 .55 .52 .49	.59 .54 .51 .48	.53 .50 .47	.51 .49 .47	.50 .48 .46	.45
4	.56 .50 .46 .43	.55 .50 .46 .42	.48 .45 .42	.47 .44 .41	.46 .43 .41	.40
5	.52 .45 .41 .37	.51 .45 .40 .37	.44 .40 .37	.42 .39 .37	.41 .39 .36	.35
6	.49 .41 .37 .33	.47 .41 .36 .33	.40 .36 .33	.39 .35 .33	.38 .35 .32	.31
7	.45 .37 .33 .30	.44 .37 .32 .29	.36 .32 .29	.35 .32 .29	.34 .31 .29	.28
8	.41 .34 .29 .26	.40 .33 .29 .26	.32 .28 .26	.32 .28 .25	.31 .28 .25	.24
9	.35 .30 .26 .22	.37 .30 .26 .22	.29 .25 .22	.29 .25 .22	.28 .25 .22	.20
10	.35 .28 .23 .20	.34 .27 .23 .20	.27 .23 .20	.26 .22 .20	.28 .22 .20	.21

ROOM CAVITY RATIO

3 TUBE PARABOLIC TYPE LUMINAIRE
APPROVED FOR RECESSED MOUNTING

THE LUMINAIRE SHALL BE COMMERCIAL TYPE WITH CODE GAUGE STEEL, RIGIDIZED BY FULL LENGTH DIE EMBOSSING.

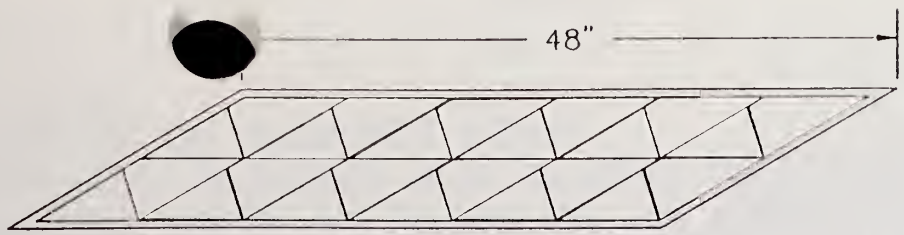
LOUVER ASSEMBLY TO BE PROVIDED WITH SELF-ALIGNING SPRING LOADED TRIGGER LATCHES AND HEAVY GAUGE STEEL HINGES WHICH ALLOW HINGING FROM EITHER SIDE. PAINTED METAL PARTS ARE PRIMED WITH A COATING OF IRON PHOSPHATE. REGRESS AREA IS PAINTED MATTE BLACK ENAMEL, LOUVERS ARE TO BE PRE-ANODIZED SEMI-SPECULAR ALUMINUM.

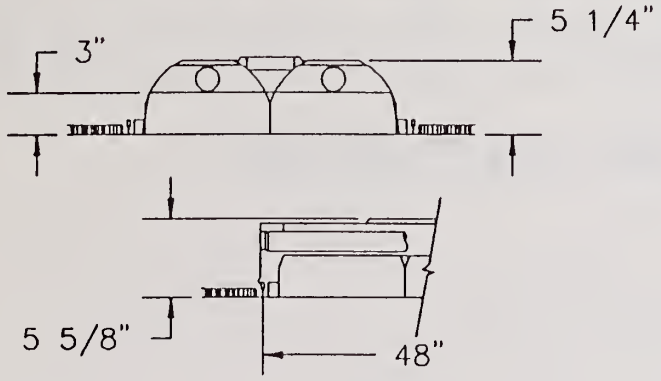
THE COEFFICIENT OF UTILIZATION SHALL NOT BE LESS THAN .40 BASED ON A CEILING REFLECTANCE OF 50 PERCENT, WALL REFLECTANCE OF 30 PERCENT, FLOOR REFLECTANCE OF 20 PERCENT, AND A ROOM CAVITY OF 5.

BALLAST SHALL BE ENERGY SAVING, HPF, ETL, 430MA WITH U.L. AND C.B.M. LABELS.
VOLTAGE TO BE SHOWN ON DRAWINGS.
FIXTURE TO BE GLOBE CAT. NO ALP 9033-4R-02-18 OR APPROVED EQUAL

LAMP F41 3-4 FOOT-F[illegible]12 CW
BALLAST RAPID START

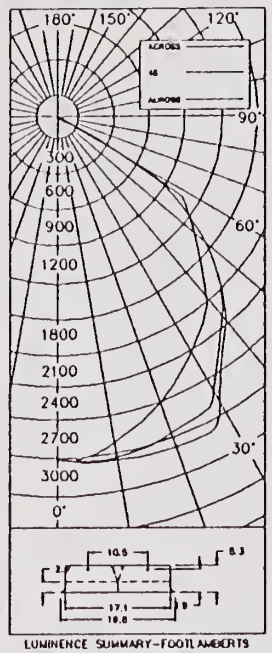
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LIGHTING SCIENCES INC.
7830 E. EVANS RD. SCOTTSDALE, AZ. 85260 602-991-9260

CERTIFIED TEST REPORT NO. 2796 COMPUTED BY LSI PROGRAM **TEST-LITE**
GLOBE 20 IN. X 4 FT RECESSED TROFFER, CAT NO. ALP9032-4R-05-12
12 CELL SDM-SPECULAR LOUVER. ADVANCE BALLAST #R-240-TP
TWO F40LW/RS/WM FLOURESCENT LAMPS. LUMEN RATING = 3050 LMS.



CANDLEPOWER SUMMARY

ANGLE	ACROSS	67.5	45	22.5	ALONG	OUTPUT LUMENS
0	1616	1616	1616	1616	1616	
5	1625	1622	1615	1613	1610	154
10	1644	1639	1612	1592	1564	
15	1652	1639	1600	1559	1540	452
20	1654	1631	1572	1517	1488	
25	1670	1628	1538	1466	1423	714
30	1665	1616	1502	1407	1346	
35	1661	1584	1461	1335	1261	921
40	1793	1605	1400	1251	1159	
45	1579	1543	1324	1153	1043	1012
50	1167	1225	1220	1033	906	
55	852	739	944	856	741	733
60	397	406	575	620	527	
65	238	232	262	294	215	272
70	85	83	91	82	49	
75	36	35	32	31	27	42
80	18	18	18	17	15	
85	6	7	6	7	6	8
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

0-30	1320	21.65	30.65
0-40	2240	36.74	62.02
0-60	3966	65.34	93.52
0-90	4308	70.63	100.00
40-90	2067	33.89	47.96
60-90	322	5.28	7.46
90-180	0	0.00	0.00
0-180	4308	70.63	100.00

** EFFICIENCY = 70.63% **

PAINT REFLECTANCE = .68 2/AH = 1.6
SC(ALONG) = 1.2, SC(ACROSS) = 1.6
CERTIFIED BY:
JON LEWIS DATE
OCT 28, 1982
PREPARED FOR:
GLOBE ILLUMINATION
GARDENA, CA.
SHIELDING ANGLE: 35° C -23° L

LUMINENCE SUMMARY-FOOTLAMBERTS

ANGLE	ACROSS	45	ALONG
45	2023	1962	1752
55	1434	1622	1558
65	561	673	843
75	144	136	117
85	85	75	85

TESTED IN ACCORDANCE WITH IES PROCEDURES. TEST DISTANCE = 8 METERS (26')

COEFFICIENTS OF UTILIZATION
EFFECTIVE FLOOR CAVITY REFLECTANCE = .20

CC	80	70	50	30	10	0
WALL	70 50 30 10	70 50 30 10	50 30 10	50 30 10	50 30 10	0
1	.75 .73 .71 .69	.74 .72 .70 .68	.69 .67 .66	.66 .65 .64	.64 .63 .62	.60
2	.70 .66 .62 .59	.69 .65 .61 .59	.62 .60 .57	.60 .58 .56	.58 .57 .55	.54
3	.65 .59 .55 .51	.64 .58 .54 .51	.57 .53 .50	.55 .52 .49	.53 .51 .48	.47
4	.60 .53 .48 .45	.59 .53 .48 .44	.51 .47 .44	.49 .46 .43	.48 .45 .43	.41
5	.55 .48 .42 .38	.54 .47 .42 .38	.46 .41 .38	.44 .41 .38	.43 .40 .37	.36
6	.51 .43 .38 .34	.50 .42 .37 .33	.41 .37 .33	.40 .36 .33	.39 .35 .33	.31
7	.47 .39 .33 .30	.46 .38 .33 .29	.37 .32 .29	.36 .32 .29	.35 .32 .29	.27
8	.43 .35 .29 .25	.42 .34 .29 .25	.33 .29 .25	.32 .28 .25	.32 .28 .25	.24
9	.40 .31 .26 .22	.39 .31 .26 .22	.30 .25 .22	.29 .25 .22	.28 .24 .21	.20
10	.37 .28 .23 .19	.36 .28 .23 .19	.27 .22 .19	.26 .22 .19	.26 .22 .19	.18

ROOM CAVITY RATIO

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4 TUBE PARABOLIC TYPE LUMINARE
APPROVED FOR RECESSED MOUNTING

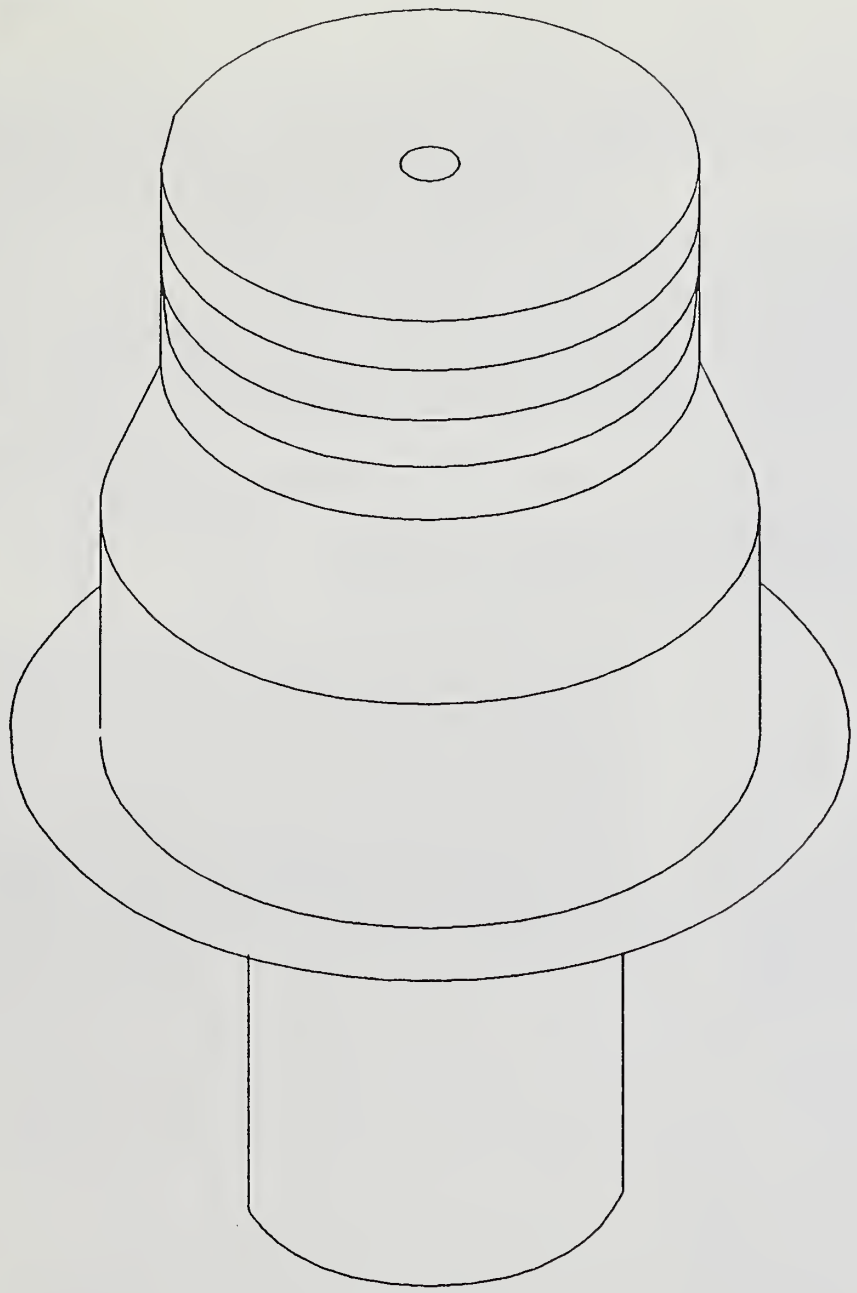
THE LUMINARE SHALL BE COMMERCIAL TYPE WITH CODE GAUGE STEEL, RIGIDIZED BY FULL LENGTH DIE EMBOSSING.

LOUVER ASSEMBLY TO BE PROVIDED WITH SELF-ALIGNING SPRING LOADED TRIGGER LATCHES AND HEAVY GAUGE STEEL HINGES WHICH ALLOW HINGING FROM EITHER SIDE. PAINTED METAL PARTS ARE PRIMED WITH A COATING OF IRON PHOSPHATE. REGRESS AREA IS PAINTED MATTE BLACK ENAMEL, LOUVERS ARE TO BE PRE-ANODIZED SEMI-SPECULAR ALUMINUM.

THE COEFFICIENT OF UTILIZATION SHALL NOT BE LESS THAN .41 BASED ON A CEILING REFLECTANCE OF 50 PERCENT, WALL REFLECTANCE OF 30 PERCENT, FLOOR REFLECTANCE OF 20 PERCENT, AND A ROOM CAVITY RATIO OF 5.

BALLAST SHALL BE ENERGY SAVING, HPF, ETL, 430MA WITH U.L. AND C.B.M. LABELS. FIXTURE TO BE GLOBE CAT. NO ALP9034-4R-02-12 OR APPROVED EQUAL.

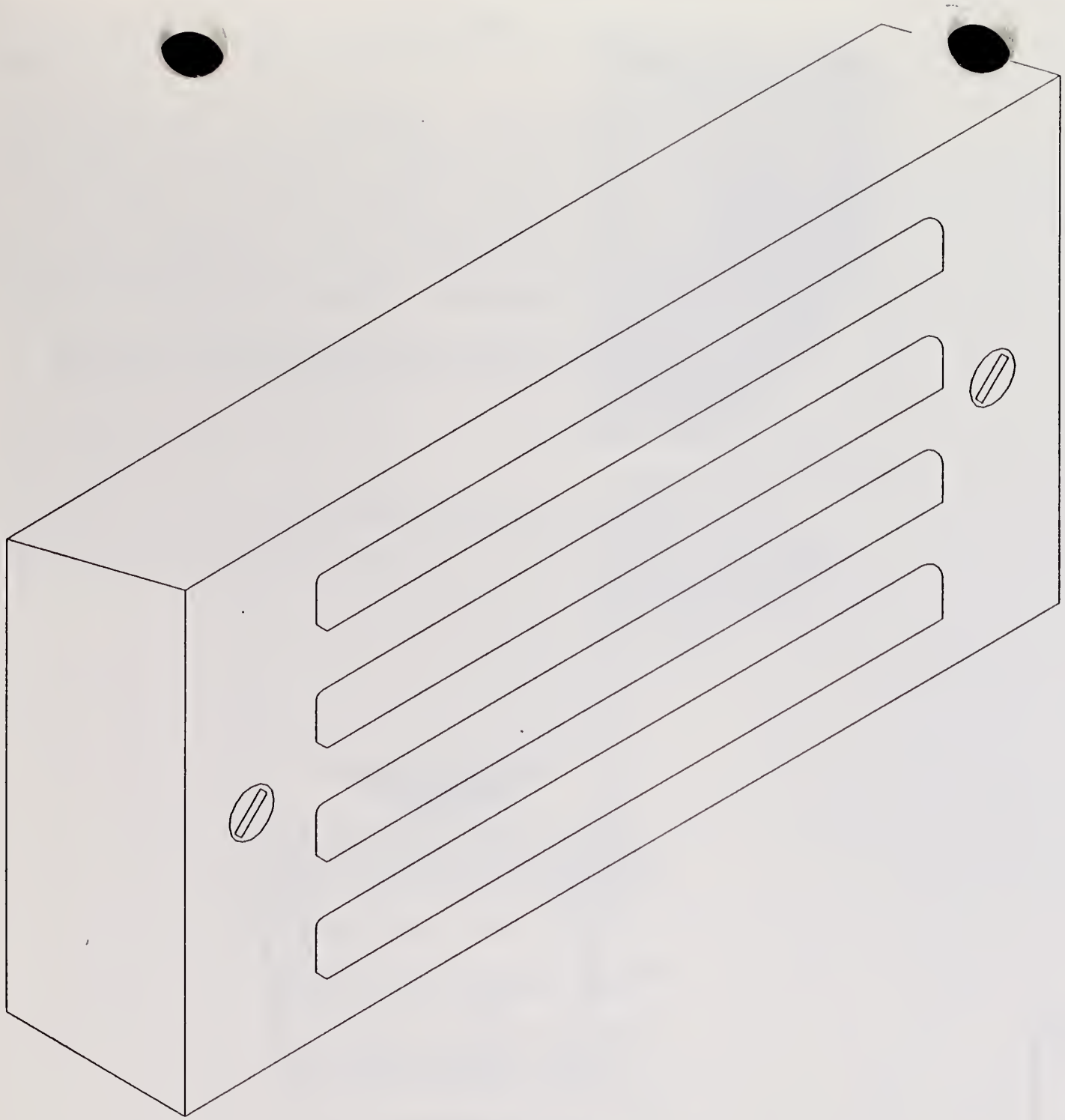
LAMPS 4-4 FOOT-F-40 T12 CW
BALLAST RAPID START



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24V D.C. STROBE LIGHT

FIXTURE SHALL BE A 24V D.C. STROBE LIGHT WITH AN OPERATING TEMPERATURE RANGE FROM −20° − 140°F, HAVE 60 SINGLE FLASHES PER MINUTE, PIPE ADAPTER AND LENS COLOR AS SHOWN ON THE DRAWINGS. PROVIDE WARN. CAT. # 212352 WITH OPTIONS LISTED ON DRAWINGS OR APPROVED EQUAL.

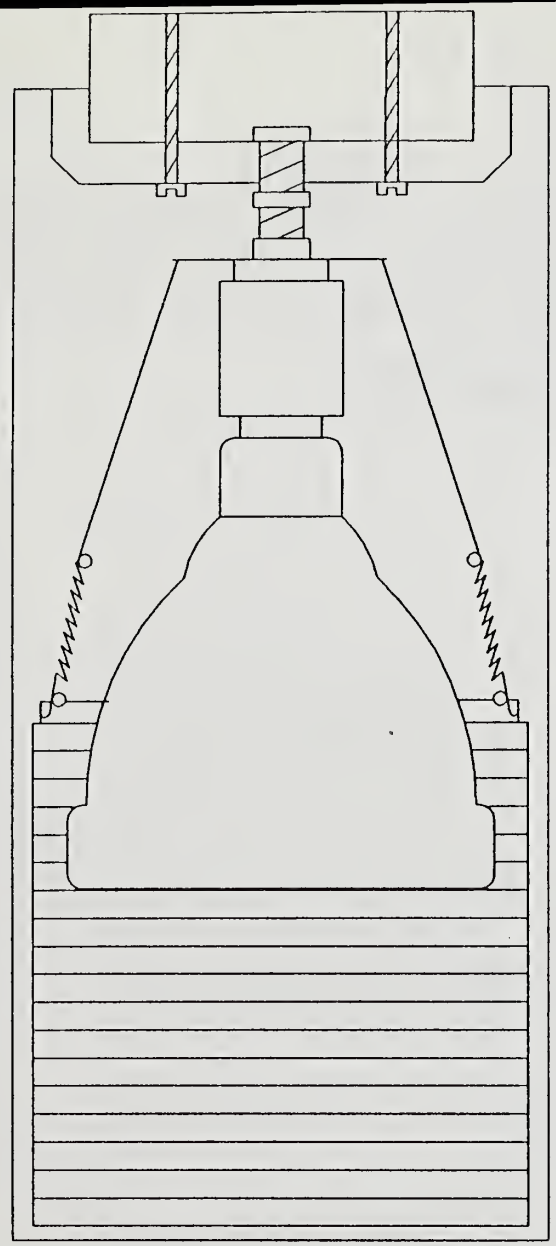


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STEP LIGHT

ANODIZED CAST ALUMINUM SURFACE MOUNTED VAPOR TIGHT STEP LIGHT WITH GASKETED LOUVERED GUARD, BACKED WITH DIFFUSING GLASS. FURNISH WITH FULL REFLECTOR OF ANODIZED ALUMINUM. 3-3/4" TAPPED HOLES.

LAMP	I-31	1 - 40W A-19
	12-28-88	



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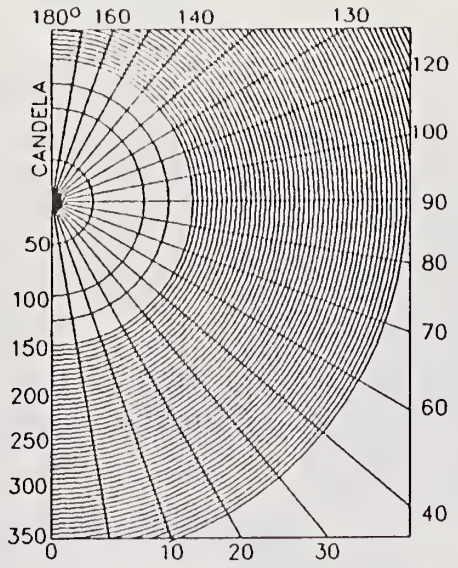
CEILING CYLINDER INCANDESCENT FIXTURE

CYLINDER SHALL BE BRONZE ANODIZED ALUMINUM WITH SPRING SUSPENDED, BLACK GROOVED BAFFLE. FIXTURE SHALL BE EQUIPPED WITH PORCELAIN SOCKET, FIT BOTH 3-1/4" AND 4" OUTLET BOXES, AND BE U.L. APPROVED FOR SURFACE MOUNTING. OVERALL HEIGHT SHALL BE APPROXIMATELY 12", DIAMETER APPROXIMATELY 6".

LAMP I-25 1 - 150W R-40 FLOOD

12-28-88

DATA



TESTED AT TWENTY FIVE FEET WITH LAMP RATED AT 1000 LUMENS IF DATA IS DESIRED FOR OTHER LAMP LUMENS MULTIPLY CANDELA AND LUMEN VALUES GIVEN BY RATIO–DIFFERENT LAMP RATING DIVIDED BY 1000 LUMENS

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HPS–14 250 WATT LOWMOUNT HIGH PRESSURE SODIUM (WEATHERPROOF)

FIXTURE SHALL HAVE DIECAST ALUMINUM BALLAST HOUSING, SPUN ALUMINUM REFLECTOR, ALZAK PROTECTED INSIDE AND OUT. REFRACTOR SHALL BE GASKETED AND SPUN ONTO REFLECTOR FOR MAXIMUM SEAL RELIABILITY. PROVIDE ENCLOSED ACTIVATED CHARCOAL FILTER.

REFLECTOR SHALL BE U.V. STABILIZED INJECTION MOLDED ACRYLIC PLASTIC.

PROVIDE LUMINAIRE WITH GASKETS AT ALL POINTS WHERE WATER AND DUST ENTRY IS PROBABLE. ALL EXTERNAL HARDWARE TO BE STAINLESS STEEL.

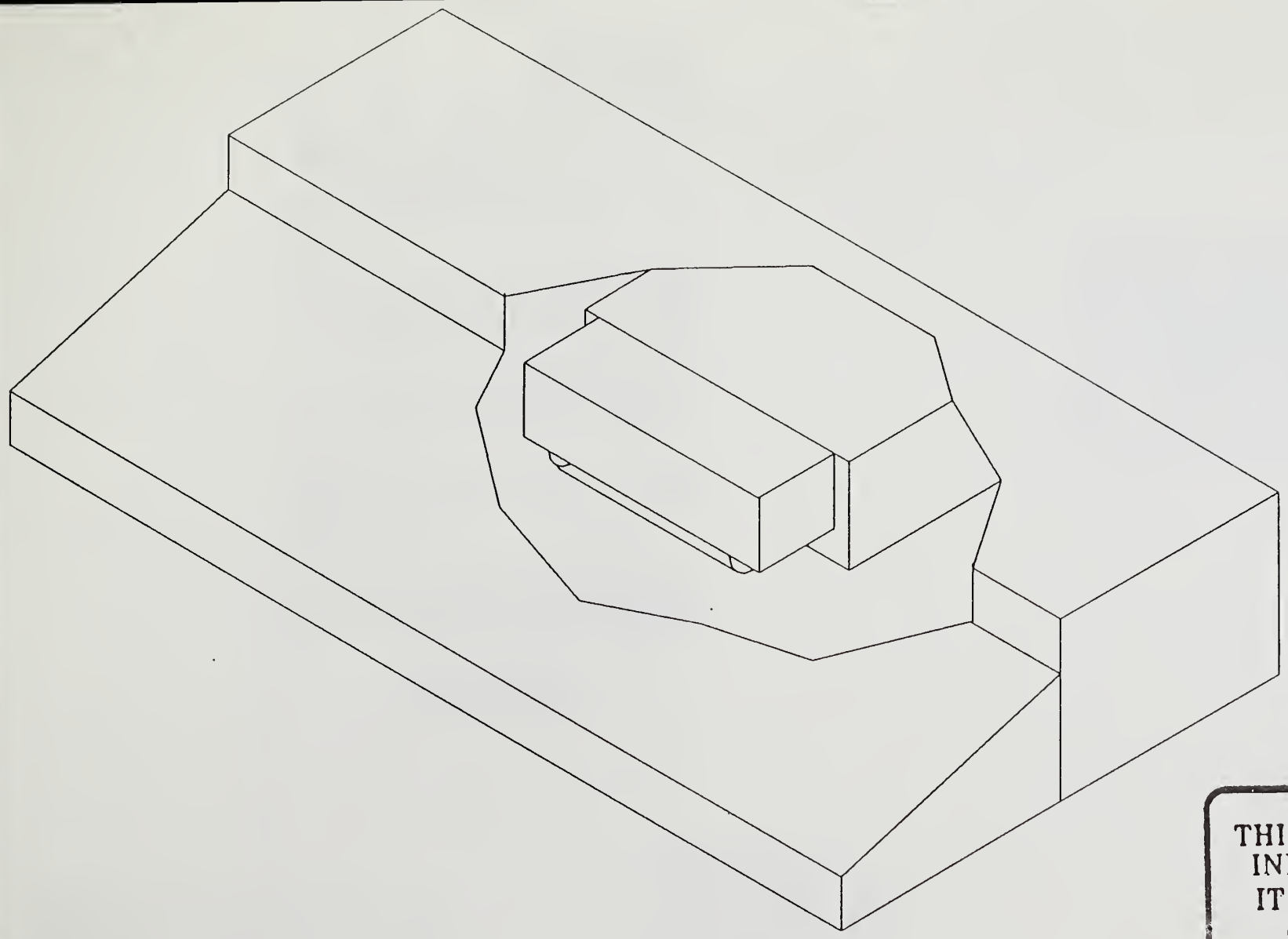
THE BALLAST SHALL START AND OPERATE THE LAMP IN AMBIENT TEMPERATURES DOWN TO 20F. THE FIXTURE SHALL OPERATE WITH INPUT VOLTAGE VARIATIONS OF ±10% FROM NOMINAL. AT RATED LINE VOLTAGE THE BALLAST SHALL HAVE A MINIMUM POWER FACTOR OF 95%.

THE COEFFICIENT OF UTILIZATION SHALL BE NOT LESS THAN .67 BASED ON A CEILING REFLECTANCE OF 50%, WALL REFLECTANCE OF 30%, FLOOR REFLECTANCE OF 20% AND A ROOM CAVITY RATIO OF 2. EACH UNIT SHALL BE COMPLETELY WIRED AND EQUIPPED WITH ALL AUXILIARIES.

PROVIDE A BACKUP 150 WATT SINGLE ENDED BAYONET TYPE QUARTZ LAMP. LAMP WILL REMAIN ON UNTIL HID LAMP REACHES 60% OF FULL LIGHT OUTPUT.

PROVIDE G.E. MODEL LOW MOUNT 150 OR APPROVED EQUAL.

LAMP	1 – 250 WATT CLEAR HIGH PRESSURE SODIUM
BALLAST	REGULATOR, VOLTAGE AS SHOWN ON DRAWINGS



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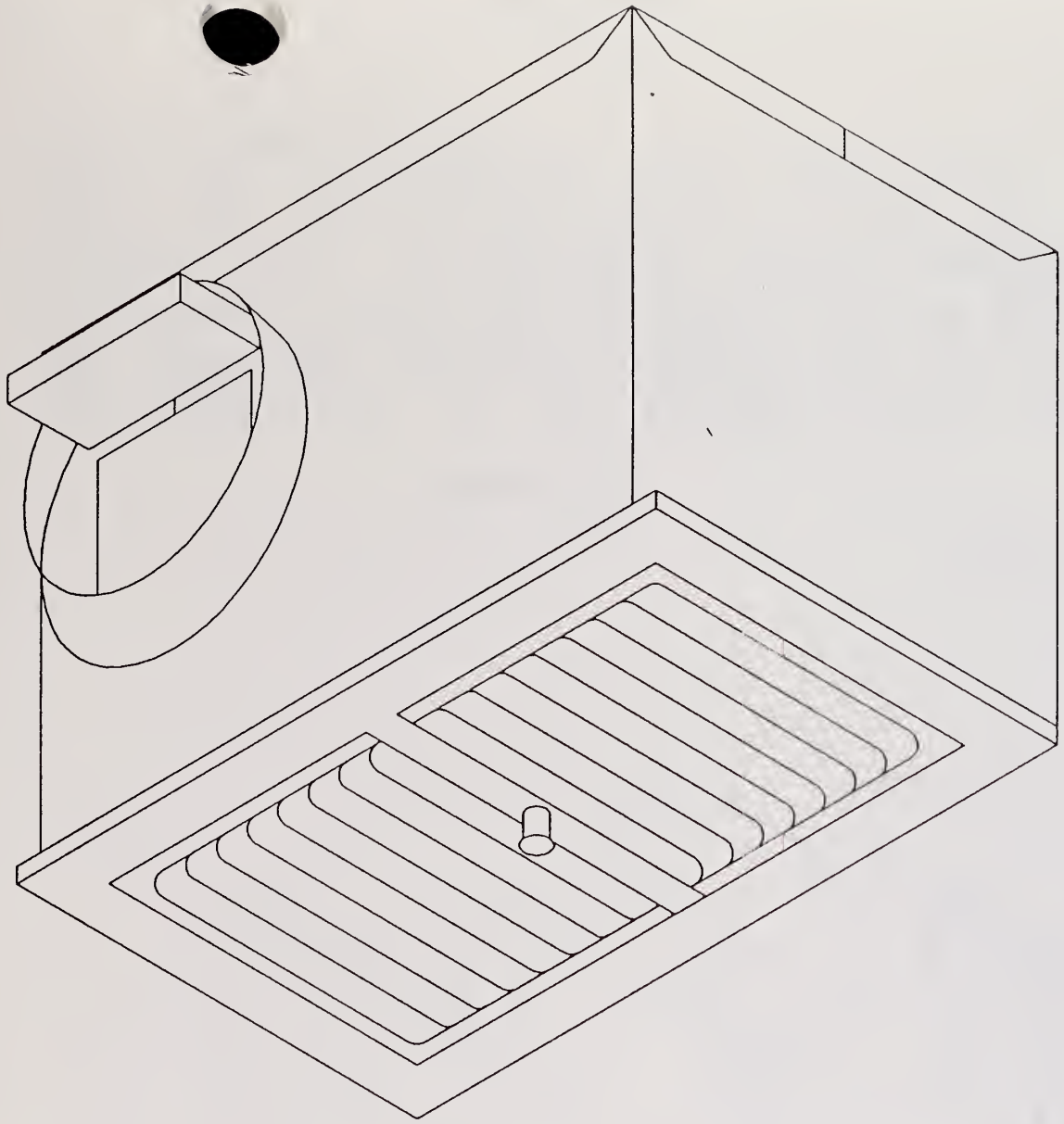
HOOD AND FAN UNIT

UNIT SHALL BE CONSTRUCTED OF SHEET METAL AND FINISHED IN SILVER ANODIZED ALUMINUM ON ALL EXPOSED SURFACES. SIZE SHALL SUIT CABINET DETAILS SHOWN ON DRAWINGS. H.V.I. RATED 325 C.F.M. HORIZONTAL DISCHARGE. HOOD SHALL BE U.L. LABELED AND LISTED, AND SHALL BE INSTALLED IN ACCORDANCE WITH SUCH LISTING. HOOD SHALL BE COMPLETE WITH EXHAUST FAN, BUILT-IN WASHABLE GREASE FILTER, BUILT-IN LIGHT WITH GLASS COVER, MULTI-SPEED FAN SWITCH AND BACK DRAFT DAMPER.

LAMP 1-75 W

E-20

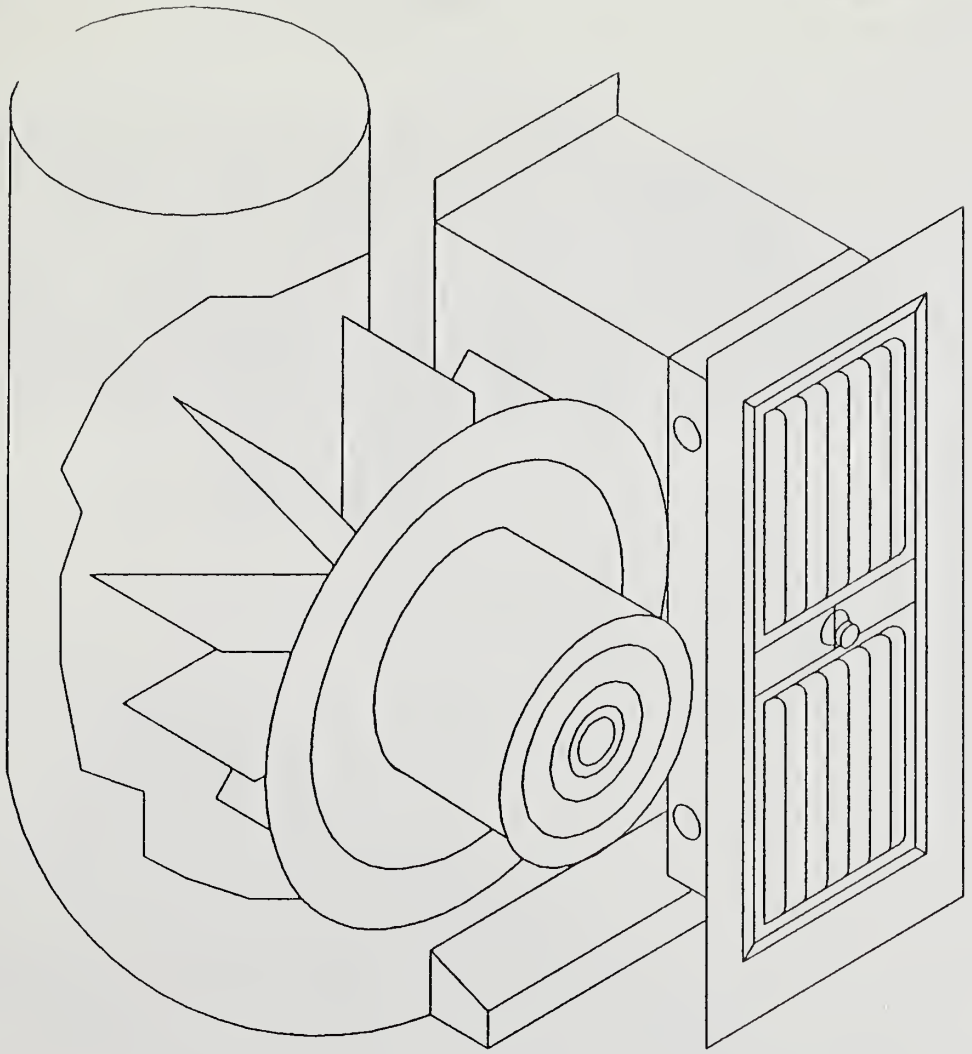
12-28-88



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CEILING FAN

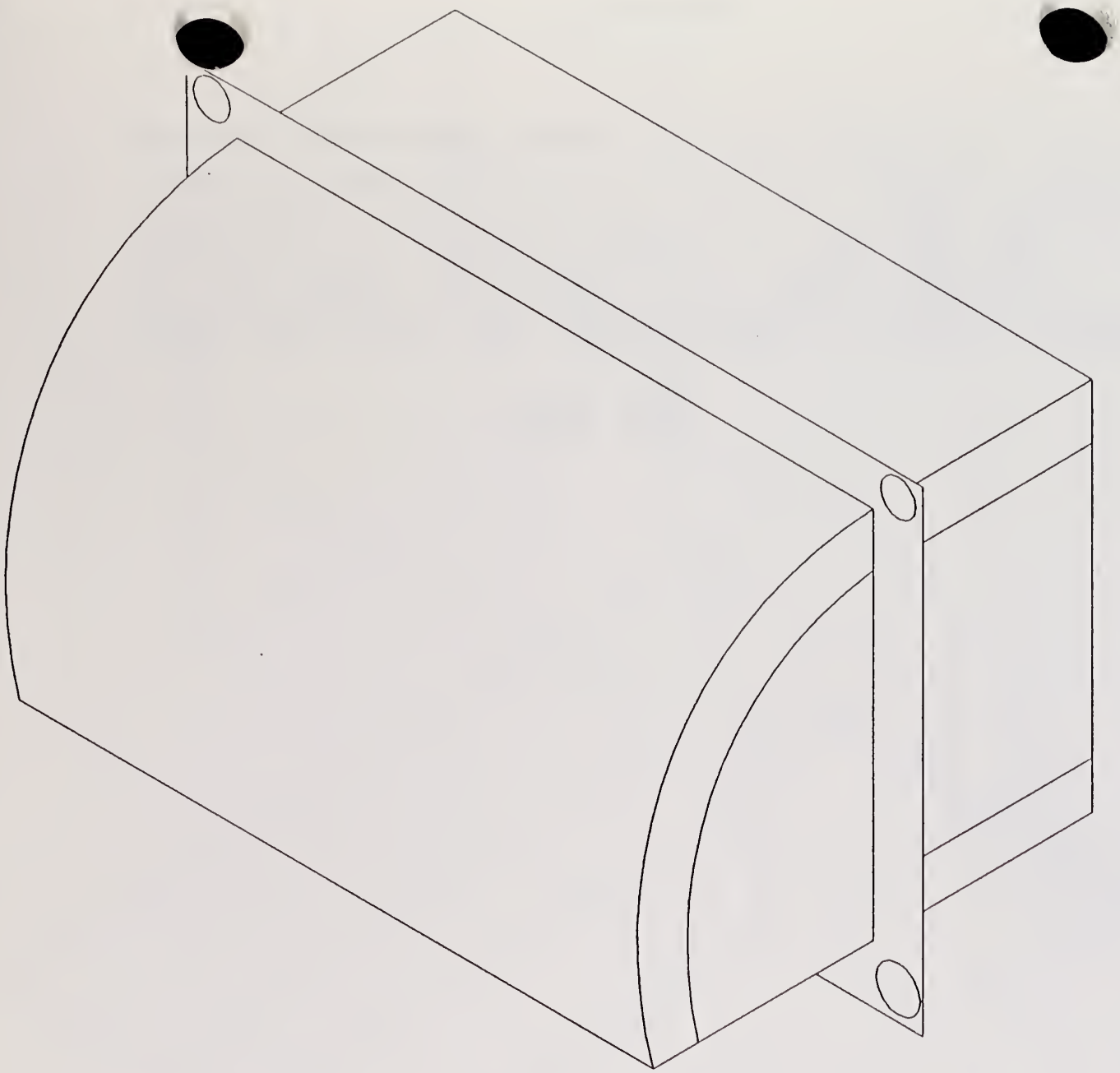
FAN HOUSING SHALL BE CONSTRUCTED OF SHEET METAL WITH ADJUSTABLE MOUNTING BRACKET. FAN SHALL BE MULTI-BLADE CENTRIFUGAL TYPE WITH PLUG-IN MOTOR AND HOUSING. GRILLE SHALL BE SILVER ANODIZED ALUMINUM FINISH. FAN SHALL BE H.V.I. RATED 80 C.F.M. THE ENTIRE UNIT SHALL BEAR U.L. LABEL, LISTED AND INSTALLED PER THE LISTING.



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WALL FAN

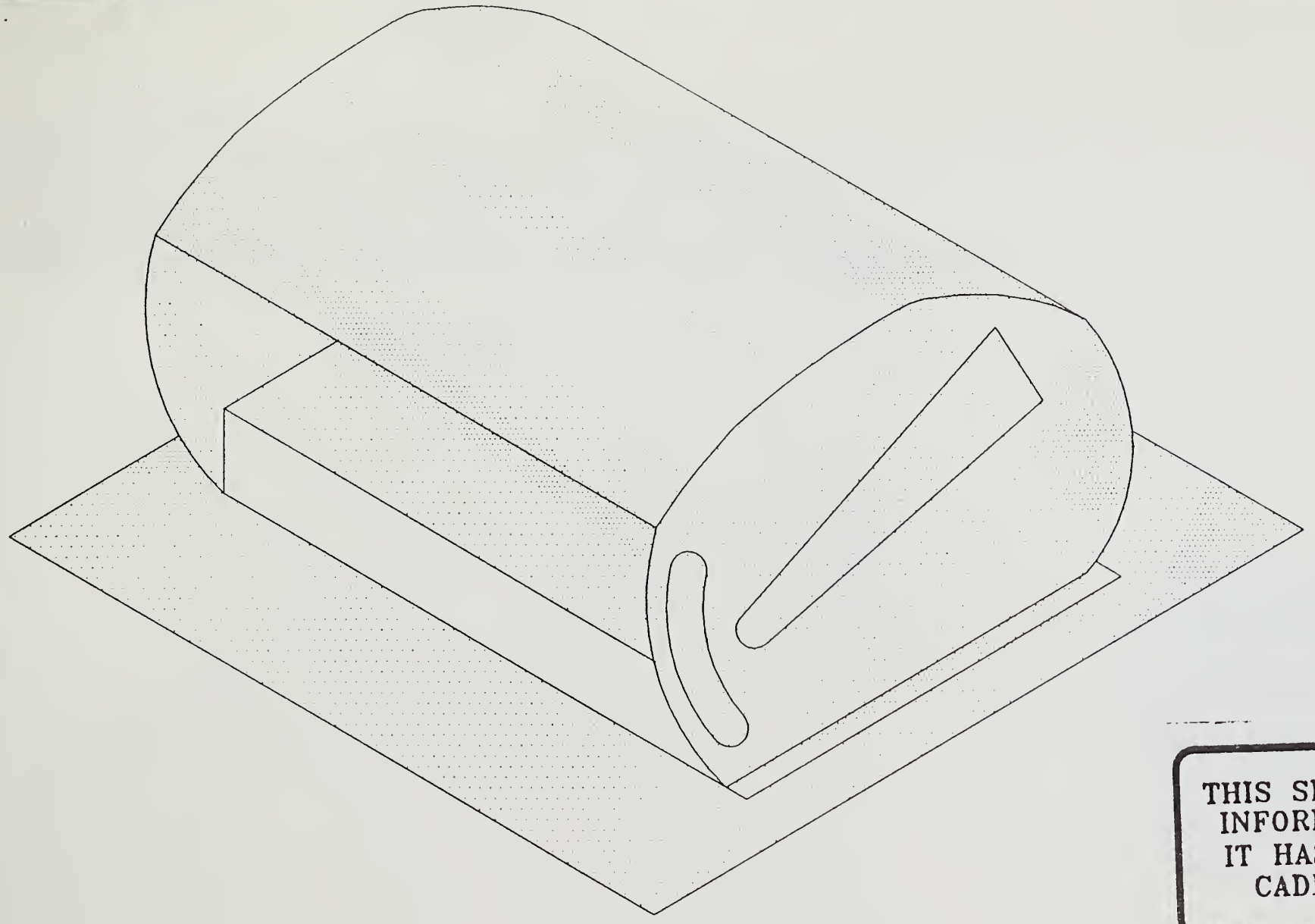
FAN HOUSING SHALL BE CONSTRUCTED OF SHEET METAL WITH ADJUSTABLE MOUNTING BRACKET. FAN SHALL BE MULTI-BLADE CENTRIFUGAL TYPE WITH PLUG-IN MOTOR HOUSING. GRILLE SHALL BE SILVER AHODIZED ALUMINUM FINISH. FAN SHALL BE H.V.I. RATED 70 C.F.M. THE ENTIRE UNIT SHALL BEAR U.L. LABEL, LISTED AND INSTALLED PER LISTING.



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WALL CAP

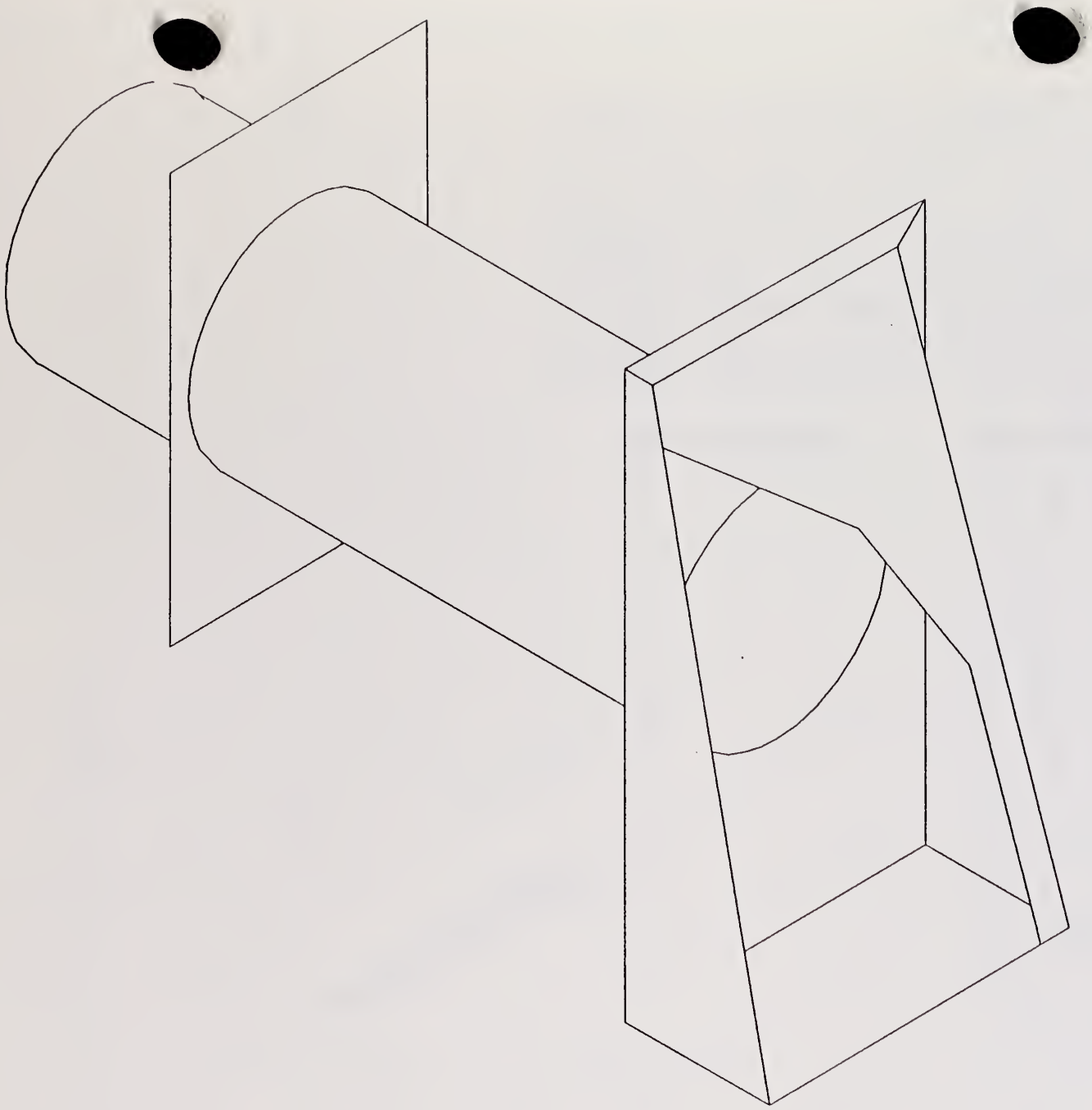
WALL CAP MAY BE FABRICATED FROM EITHER ALUMINUM OR GALVANIZED IRON. UNIT SHALL BE COMPLETE WITH GASKETED BACKDRAFT DAMPER. MINIMUM OVERALL DIMENSIONS SHALL BE 11" X 5" AND ACCEPT UP TO 3" X 10" DUCT.



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ROOF JACK

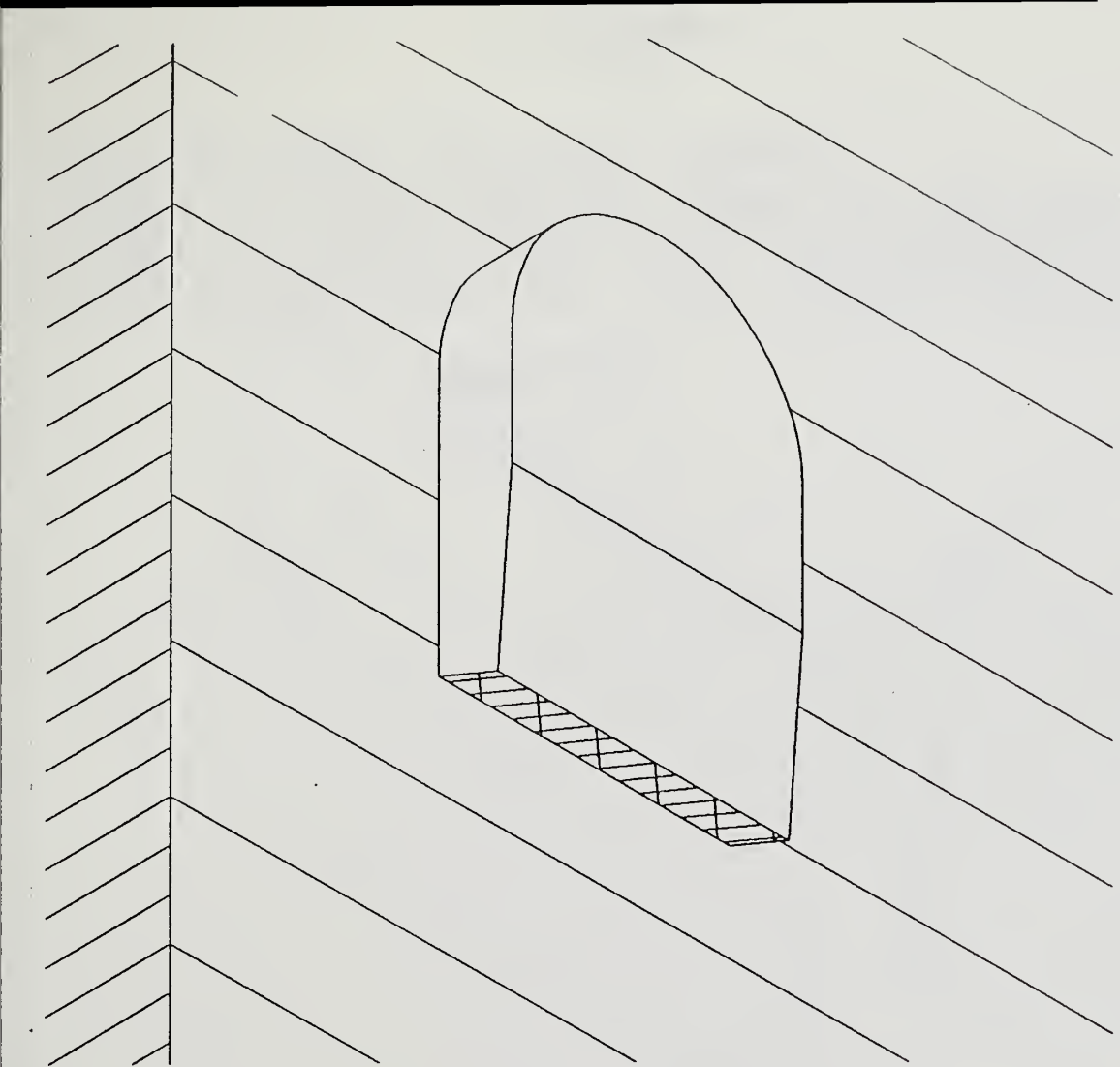
ROOF JACK SHALL BE CONSTRUCTED OF EITHER ALUMINUM OR GALVANIZED IRON. ROOF JACK SHALL PROVIDE A MINIMUM OF 50 SQUARE INCHES OF FREE AIR AND ACCOMMODATE DUCTS UP TO 10" X 10". UNIT SHALL BE COMPLETE WITH GASKETED BACKDRAFT DAMPER. OVERALL MINIMUM DIMENSIONS SHALL BE 14" X 16" X 7".

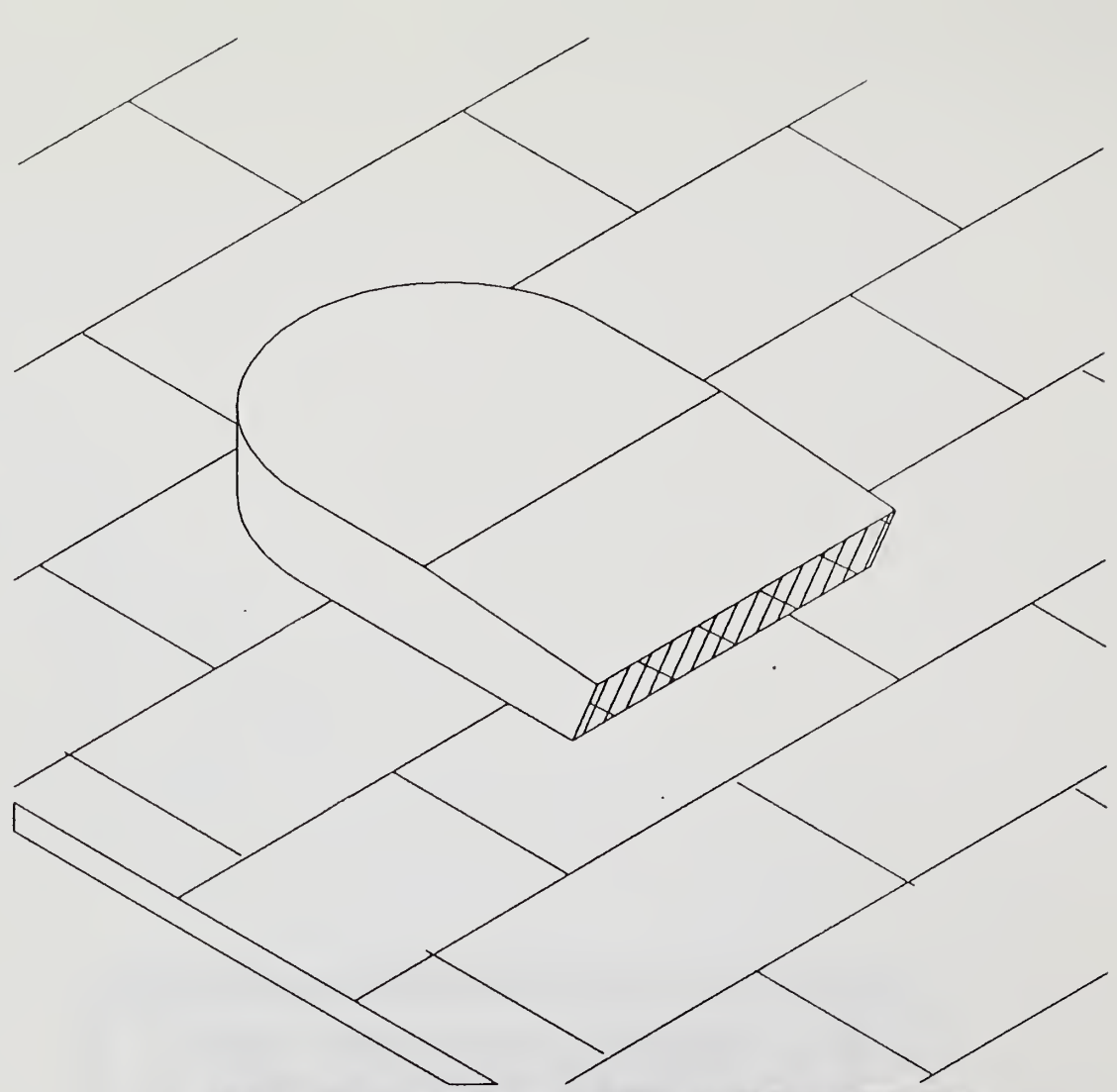


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DRYER VENT

THE DRYER VENT SHALL BE 4–INCH ALUMINUM VENT WITH 12–INCH TAIL PIECE, FLANGE PLATE AND BACKDRAFT DAMPER. TAIL PIECE SHALL BE SEAMED ON TOP. HOOD SHALL BE BEADED FOR EXTRA STRENGTH.

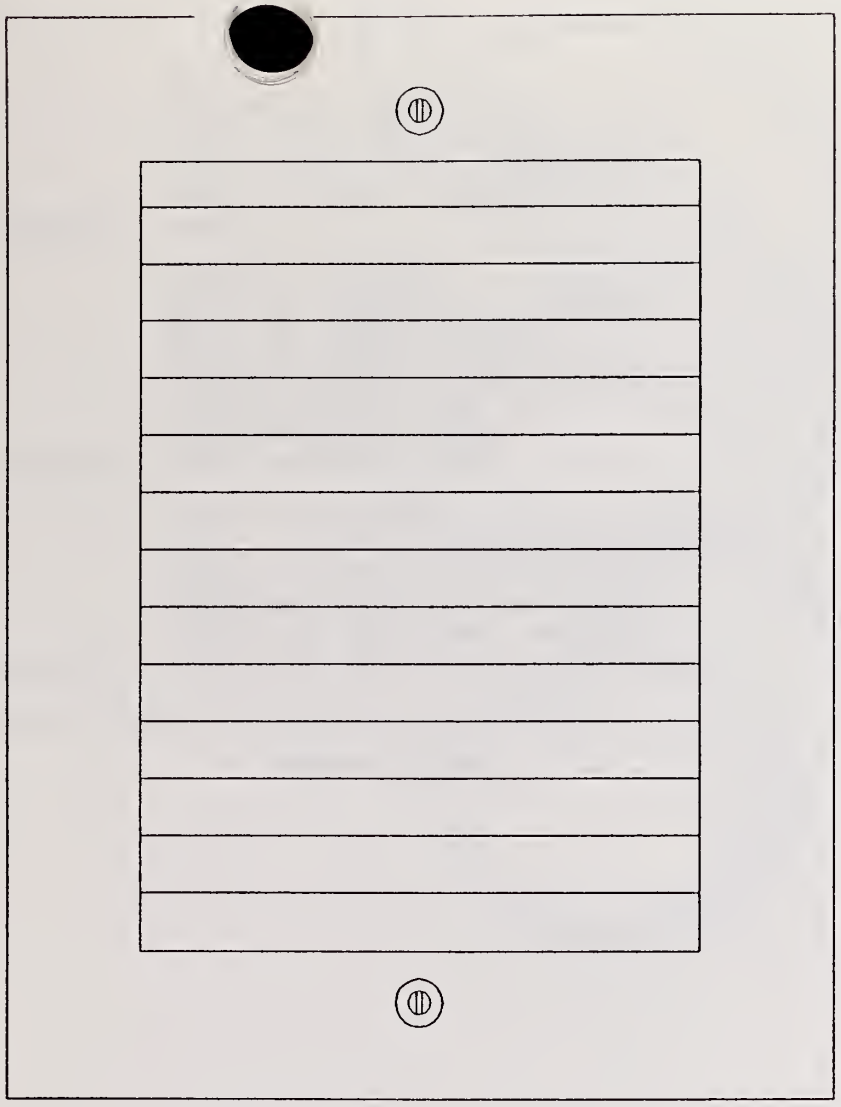


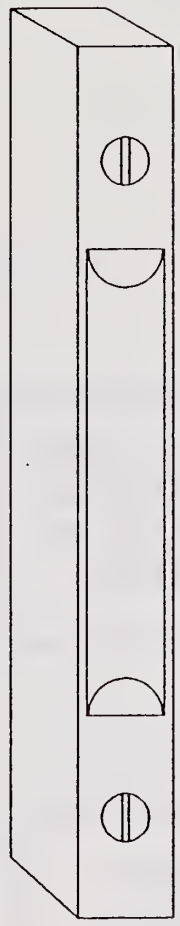


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WALL MOUNTED ROOF MOUNTED

PROVIDE VENTILATION CAP CONSTRUCTED FROM NOT LIGHTER THAN 20 GAGE GALVANIZED STEEL WITH FACTORY APPLIED ENAMEL FINISH. UNIT SHALL BE COMPLETE WITH OUTLET GRILLE AND GASKET BACKDRAFT DAMPER. SHAPED CONNECTION TO FIT 10" DIAMETER DUCT. FLASH WITH 26 GAGE GALVANIZED IRON, F.S. QQ-S-775, TYPE I, CLASS D OR .024" THICK ALUMINUM, AND SEAL WEATHER TIGHT. FOR FLAT ROOF APPLICATIONS INSTALL ON A PITCHED CURB. U.L. AND N.P.F.A. APPROVAL.

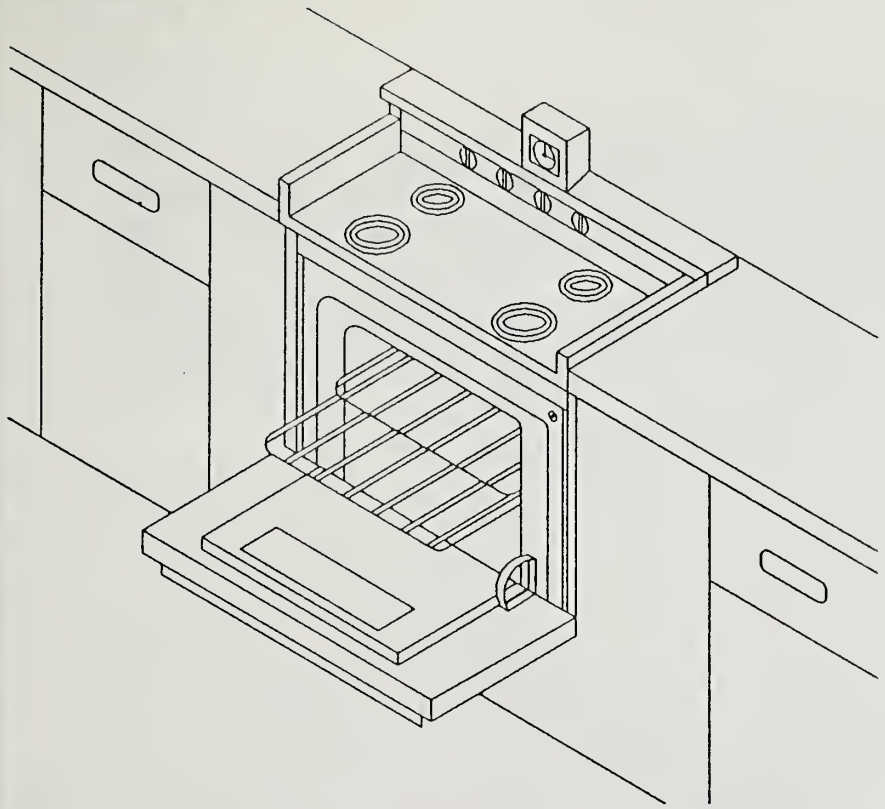




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SIGNAL SYSTEM

COVER FOR CHIME SHALL BE FACTORY PRIME PAINTED TO ACCEPT SURROUNDING WALL COLOR. SIGNAL SHALL BE TWO NOTE TYPE. UNIT SHALL BE EQUIPPED WITH TRANSFORMER AND PUSHBUTTON SIMILAR TO ILLUSTRATION WITH NON-CORROSIVE FINISH. MINIMUM WALL PLATE DIMENSION SHALL BE 5-1/2" X 7". UNIT SHALL FLUSH MOUNT.



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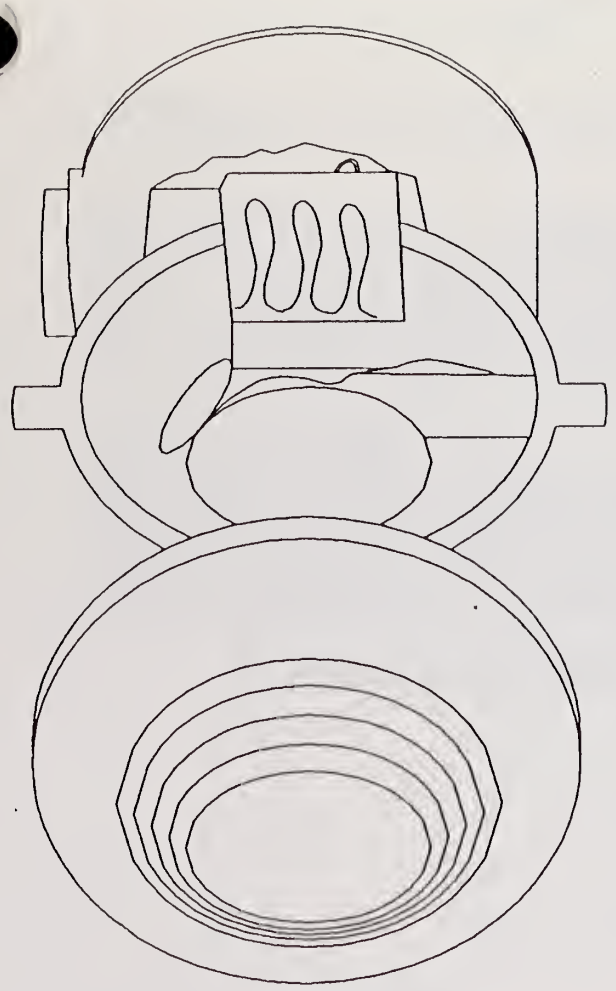
DROP-IN RANGE

DROP-IN RANGE SHALL MEET THE FOLLOWING:

ELECTRICAL – 10.4 KW ON 115/230 TO 120/240 VOLTS, 60 CYCLES, A.C. 3 WIRE. WATTAGES: BROIL UNIT 3000, BAKE UNIT 2600; SURFACE UNITS: 2 – 6" @ 1250 EACH AND 2 – 8" @ 2100 EACH. RANGE SHALL BE U.L. APPROVED.

FEATURES – OVEN TIMER AND CLOCK
TIMED APPLIANCE OUTLET
AUTOMATIC OVEN LIGHT
PORCELAIN ENAMEL BROILING PAN
BAKE AND BROIL CONTROL
INDIVIDUAL SURFACE UNIT CONTROLS WITH SIGNAL LIGHTS

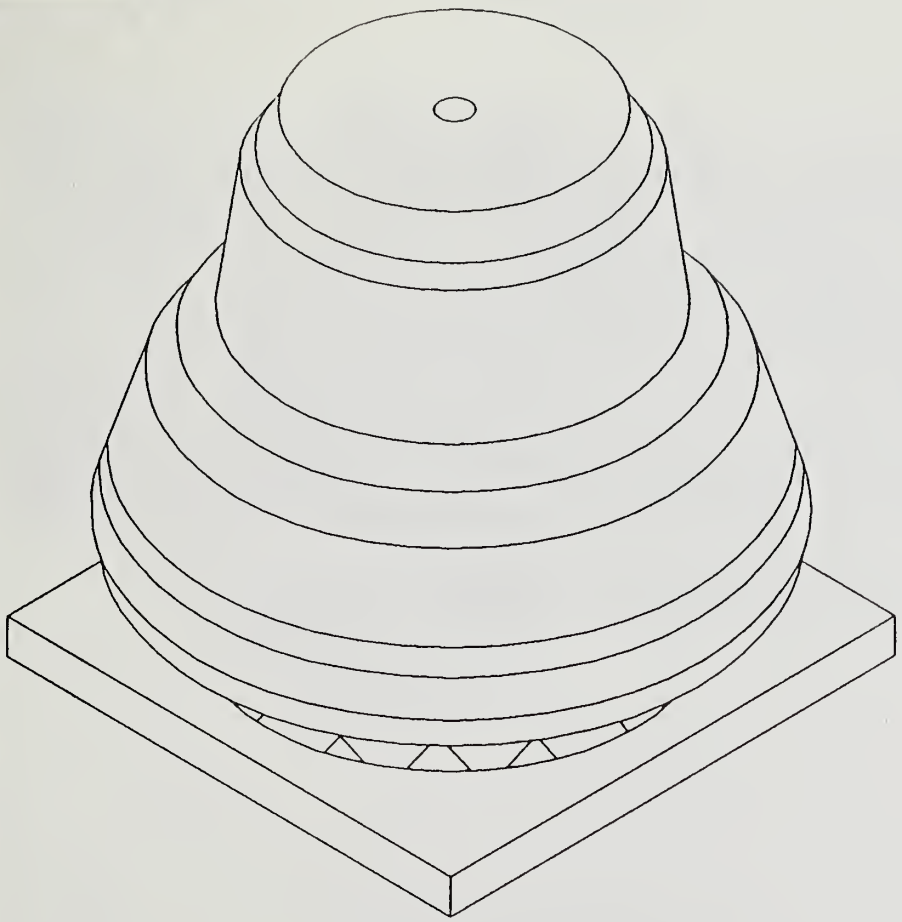
DIMENSIONS – WIDTH 30"
DEPTH AND HEIGHT SUITABLE FOR INSTALLATION IN BASE CABINETS 2' WIDE AND 36" FROM FLOOR. COMPLETE WITH BOTTOM FRONT PANEL.

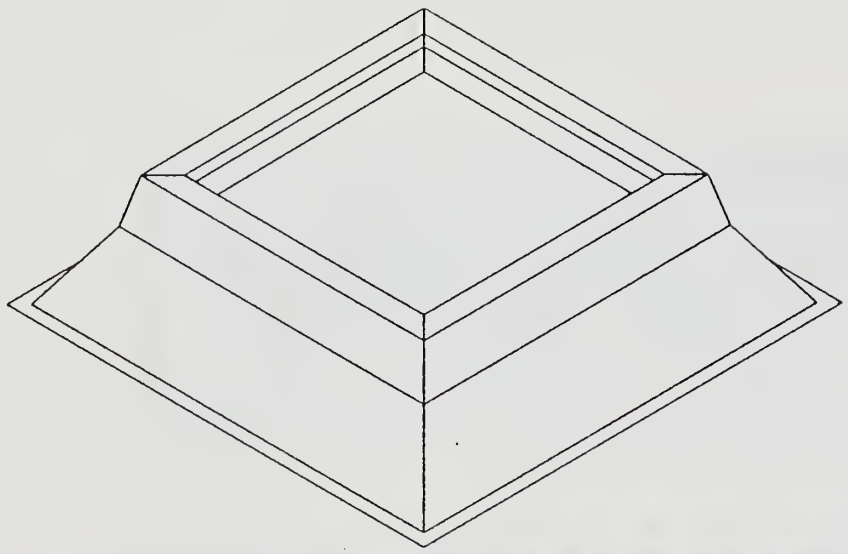


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CEILING HEATER, VENT, AND LIGHT

CEILING HEATER SHALL BE EQUIPPED WITH HANGER BARS FOR RECESSED MOUNTING IN 14" STUD SPACE. REMOTE THERMOSTAT AND SWITCH SHALL BE FURNISHED FOR SEPARATE OPERATION OF HEATER, LIGHT, OR EXHAUST, OR HEATER AND LIGHT, OR EXHAUST AND LIGHT. FAN SHALL HAVE MINIMUM 70 C.F.M. OUTPUT. ROOF CAP OR WALL CAP AND AUTOMATIC BACKDRAFT DAMPER SHALL BE FURNISHED FOR ROOF OR WALL EXHAUST. FINISH SHALL BE ANODIZED OR BAKED ENAMEL. HEATER SHALL BE 1.5 KW, 120 VOLTS, SINGLE PHASE.





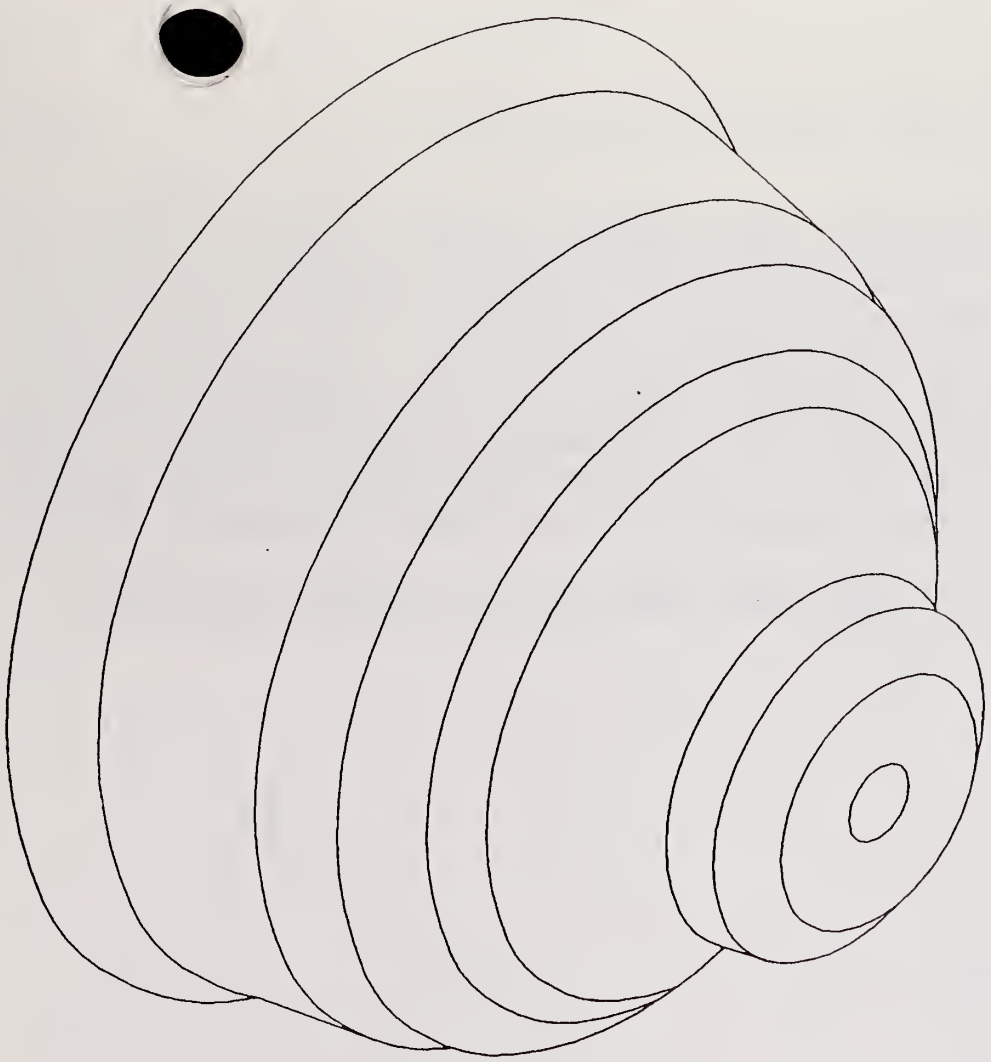
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BELT DRIVEN ROOF EXHAUST FAN

ROOF MOUNTED EXHAUST FAN SHALL HAVE SPUN ALUMINUM CORROSION RESISTANT HOUSING AND CURB CAP WITH STAINLESS STEEL FASTENINGS. UNIT SHALL BE EQUIPPED WITH WIRE BIRD GUARD, SPRING-LOADED BELT TENSIONER, AUTOMATIC BACKDRAFT DAMPER, AND VIBRATION ISOLATORS.

EXHAUST FAN SHALL HAVE BALANCED FAN AND HUB OR QUIET OPERATION, ADJUSTABLE DRIVE PULLEY FOR SPEED AND C.F.M. OUTPUT VARIATION, PRE-LUBRICATED BALL BEARING TYPE DRIVE, EXTERNAL ALUMINUM WIRING POST FOR CONDUIT, AND BE U.L. APPROVED FOR EXTERIOR ROOF MOUNTING.

HORSEPOWER, C.F.M., VOLTAGE AND PHASE AS SHOWN ON DRAWINGS.

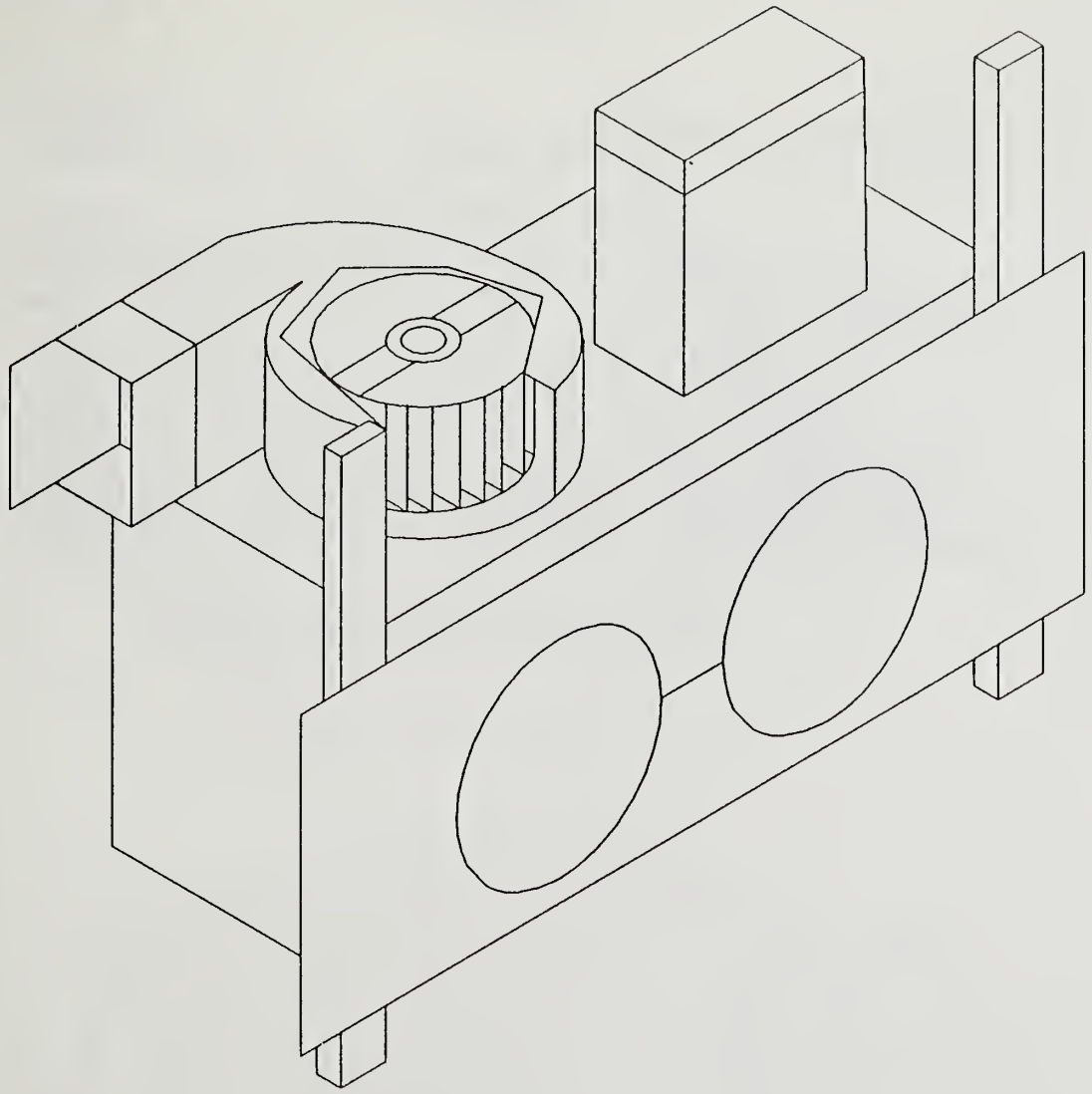


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DIRECT DRIVE WALL EXHAUST FAN

WALL MOUNTED EXHAUST FAN SHALL HAVE SPUN ALUMINUM CORROSION RESISTANT HOUSING WITH STAINLESS STEEL FASTENINGS. UNIT SHALL BE EQUIPPED WITH AUTOMATIC BACKDRAFT DAMPER, STEEL U-SPRING SUSPENSION FOR VIBRATION ISOLATION AND STANDARD ROUND DUCT FITTINGS FOR DUCTED INSTALLATIONS. EXHAUST FAN SHALL BE BALANCED FAN AND HUB FOR QUIET OPERATION, PRE-LUBRICATED BALL BEARING TYPE DRIVE, INTERNAL ALUMINUM WIRING POST FOR CONDUIT, AND BE U.L. APPROVED FOR EXTERIOR WALL MOUNTING.

HORSEPOWER, C.F.M., VOLTAGE AND PHASE AS SHOWN ON DRAWINGS.



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INFRA-RED RADIANT HEATER AND VENT FAN

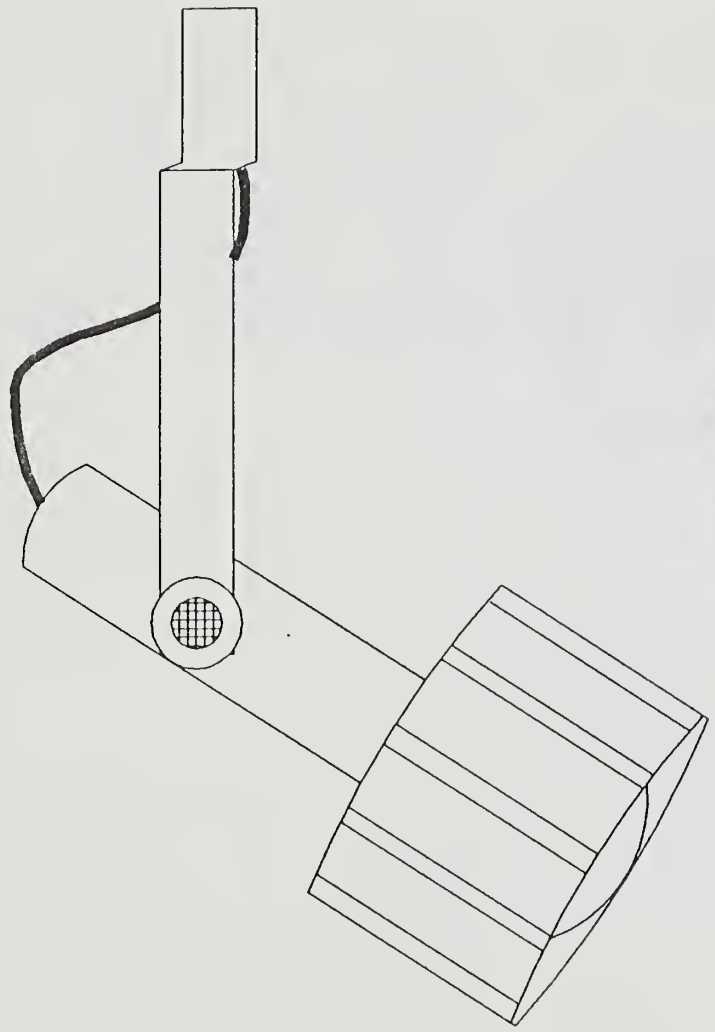
CEILING HEATER/FAN UNIT SHALL BE EQUIPPED WITH HANGER BARS FOR RECESSED MOUNTING IN 14" STUD SPACE. FURNISH REMOTE THERMOSTAT AND SWITCH FOR SEPARATE OPERATION OF HEAT LAMPS, EXHAUST, OR HEAT LAMPS AND EXHAUST. FAN SHALL HAVE MINIMUM 55 C.F.M. OUTPUT. FURNISH ROOF CAP OR WALL CAP AND AUTOMATIC BACKDRAFT DAMPER. FINISH SHALL BE ANODIZED OR BAKED ENAMEL. HEATER SHALL BE 120 VOLT, SINGLE PHASE.

LAMP 2 - 250W R-40 REFLECTOR INFRA-RED

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FIXTURE HOUSING SHALL BE CONSTRUCTED OF A MINIMUM OF 20 GAUGE COLD ROLLED STEEL AND FINISHED IN WHITE BAKED ENAMEL. LAMP SOCKET SHALL BE A MINI-CAN QUARTZ PORCELAIN SOCKET. MOUNTING SHALL BE PLASTER FRAME AND HANGER ASSEMBLY. THE APPROXIMATE DIMENSIONS OF THE FIXTURE SHALL BE 10" DEEP AND 12" SQUARE. FIXTURE SHALL BEAR THE U.L. LABEL.

LAMP (I-36) I-24 1-250 QUARTZ



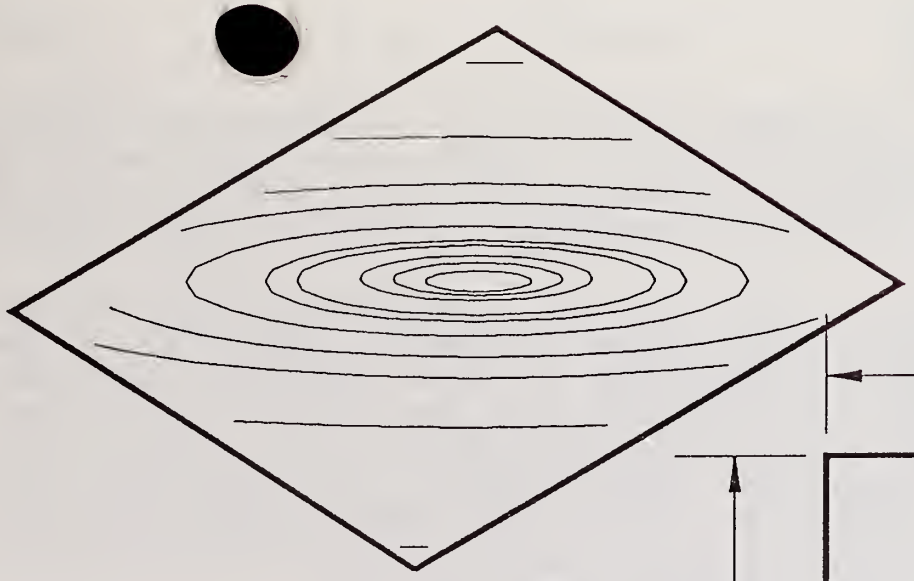
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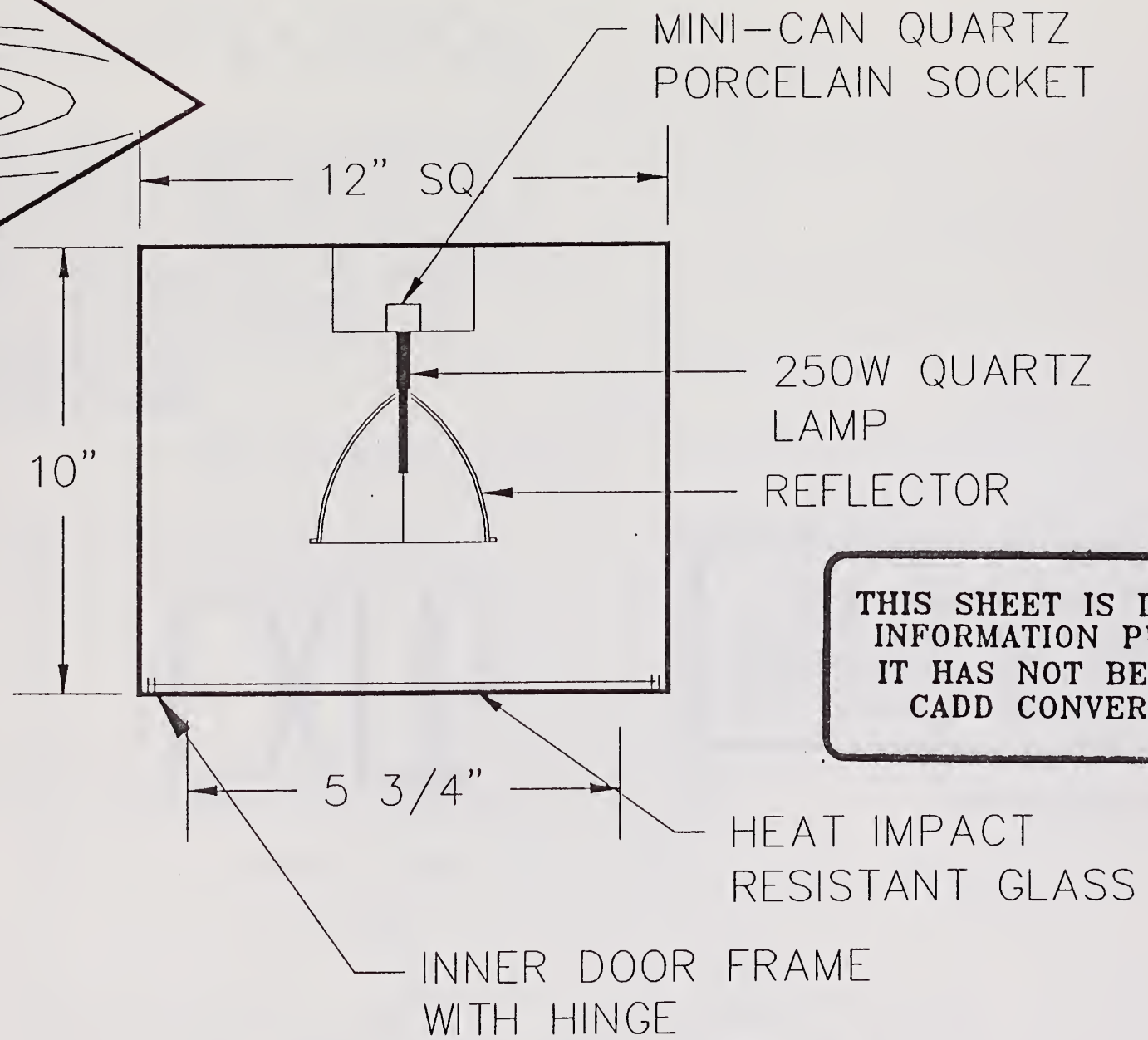
TRACK-LIGHT CEILING CYLINDER

ADJUSTABLE CYLINDER SHALL BE BLACK AND BRUSHED ALUMINUM. FIXTURE SHALL BE EQUIPPED WITH PORCELAIN SOCKET, TRACK MOUNTING ADAPTER, AND BE U.L. APPROVED FOR SURFACE AND RECESSED, LIGHT TRACK MOUNTING. OVERALL LENGTH SHALL BE APPROXIMATELY 8 1/2", DIAMTETER APPROXIMATELY 4 1/8"

10-24-88
I-26

LAMP 1-75W R30 FLOOD





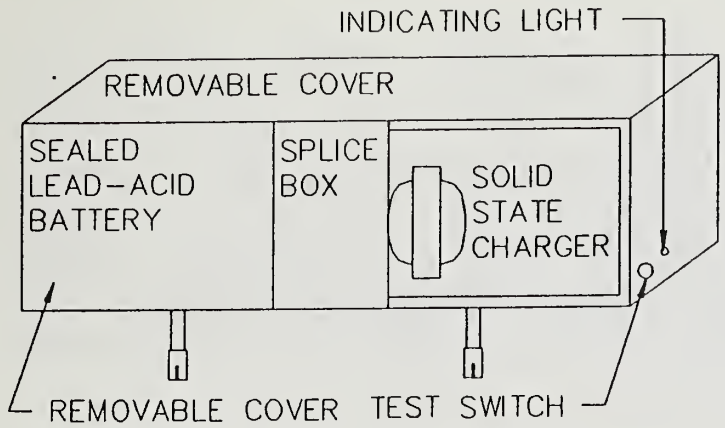
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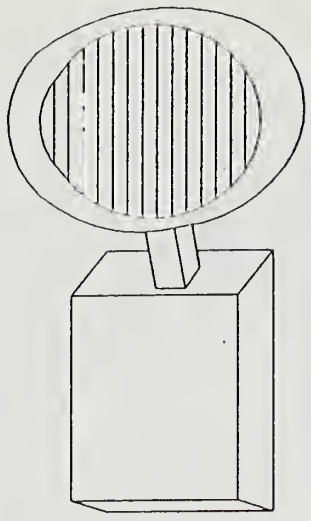
FIXTURE HOUSING SHALL BE CONSTRUCTED OF A MINIMUM OF 20 GAUGE COLD ROLLED STEEL AND FINISHED IN WHITE BAKED ENAMEL. LAMP SOCKET SHALL BE A MINI-CAN QUARTZ PORCELAIN SOCKET. MOUNTING SHALL BE PLASTER FRAME AND HANGER ASSEMBLY. THE APPROXIMATE DIMENSIONS OF THE FIXTURE SHALL BE 10" DEEP AND 12" SQUARE. FIXTURE SHALL BEAR THE U.L. LABEL.

LAMP 1-36 1-250 QUARTZ

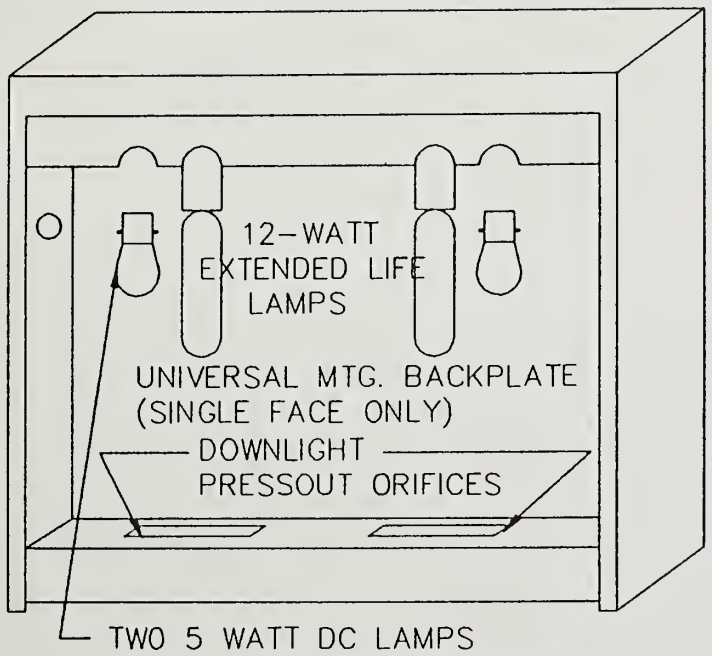
10-30-88

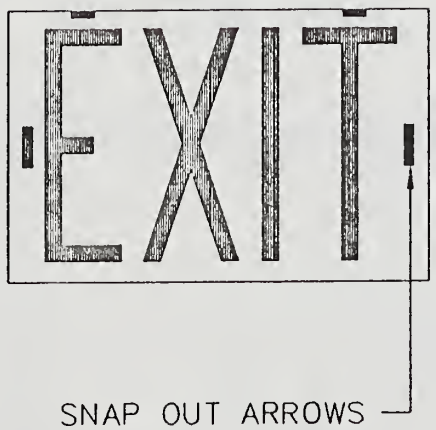
EXIT AND REMOTE EMERGENCY LIGHT





REMOTE LITE PACK



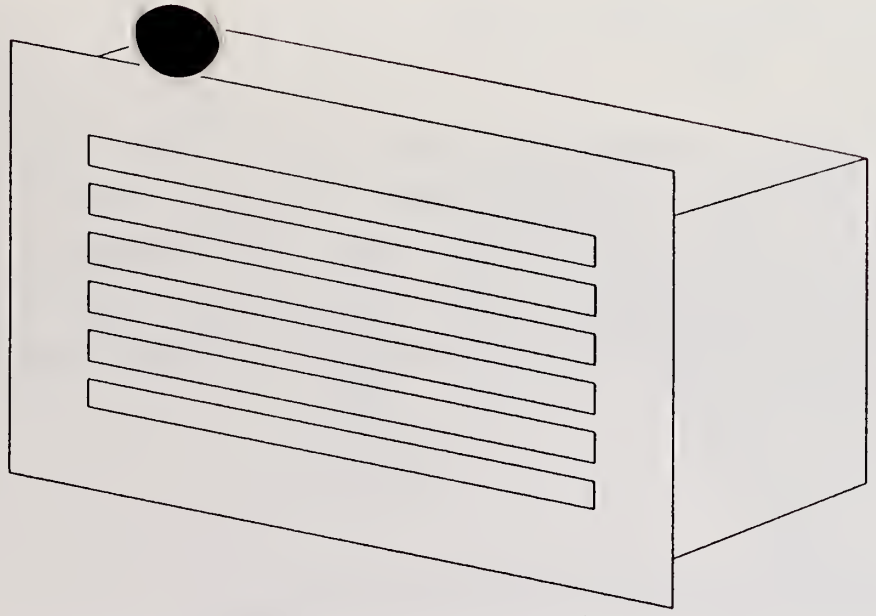


LINE VOLTAGE AND BATTERY POWER
EXIT AND REMOTE EMERGENCY LIGHT

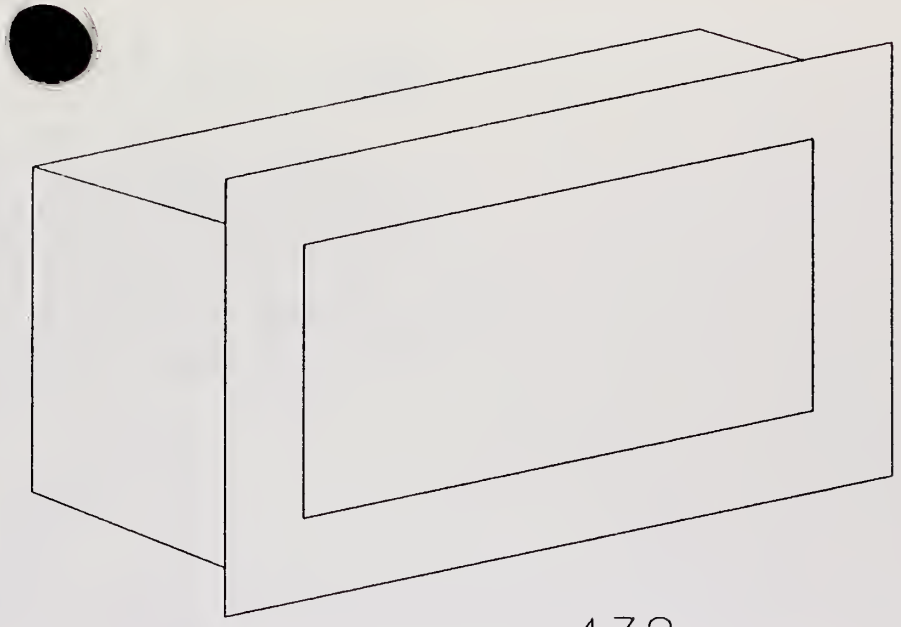
EXIT FIXTURE SHALL HAVE A DIE–CAST ALUMINUM FRAME AND CANOPY AND COLOR TO BE WHITE ENAMEL END CAPS AND MATTE BLACK HOUSING. FACE SHALL BE PLASTIC WITH 6" GREEN LETTERS. POWER PACK SHALL BE TAMPER PROOF. PROVIDE SOLID STATE CHARGER, SEALED LEAD–ACID GEL TYPE BATTERY, TWO 12 WATT AC LAMPS AND TWO 5 WATT DC LAMPS, INDICATING LIGHT, AND TEST SWITCH. DIMENSIONS SHALL BE APPROXIMATELY 2 3/8" THICK X 12 1/4" HIGH X 10 5/8" WIDE AND BRACKET HANGER DEVICE SHALL BE SUITABLE FOR TOP, END OR BACK MOUNTING.

REMOTE LIGHT PACK SHALL BE CONSTRUCTED OF MOLDED ABS WITH BACK PLATE OF STEEL, 6 V SEALED LEAD–ACID RECHARGEABLE GEL TYPE BATTERY AND 18 WATT LAMP. THIS UNIT IS POWERED BY THE EXIT POWER PACK CHARGER AND PROVIDES APPROXIMATELY 1 1/2" HOURS OF EMERGENCY LIGHTING.

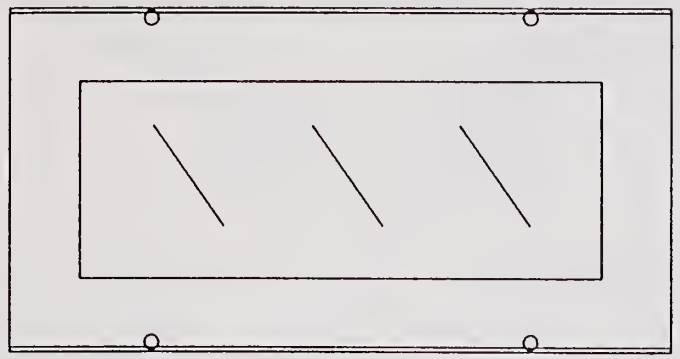
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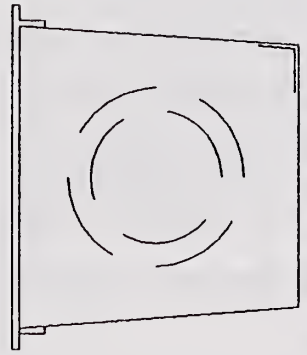


(LOUVER OPTIONAL)



432





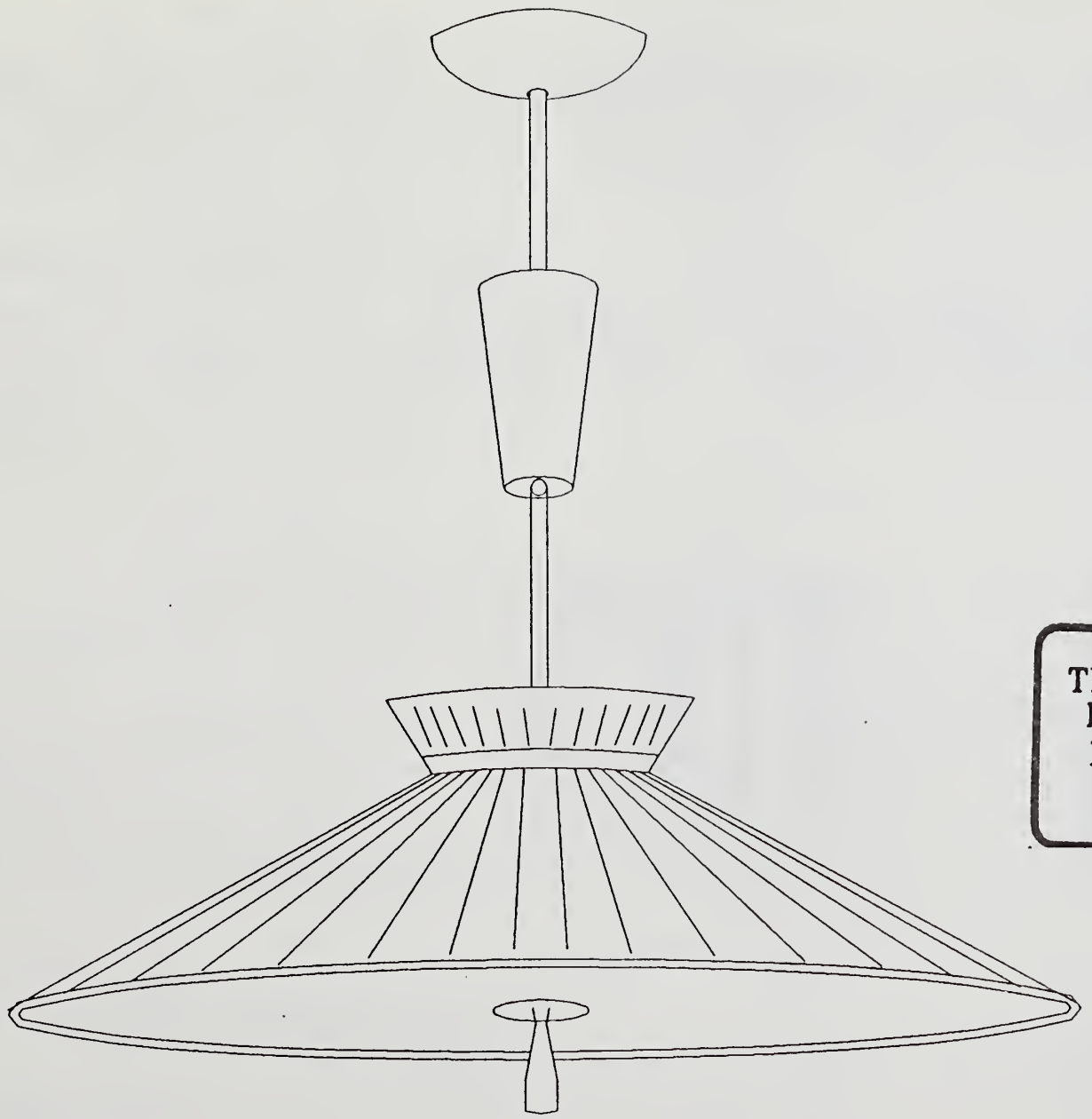
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STEP LIGHT

HEAVY DUTY CAST ALUMINUM WITH GASKET LOUVERED GUARD. FIXTURE HAS TEMPERED GLASS DIFFUSER AND 3/4" NPT HUB IN BOTH ENDS FOR FLEXIBLE INSTALLATION.

FIXTURE SHALL BE WEATHER RESISTANT AND 120V A.C. WITH ONE 100W MAX LAMP. USE HUBBEL CATALOG NUMBER 432 OR APPROVED EQUAL.

CEILING PULL DOWN FIXTURE



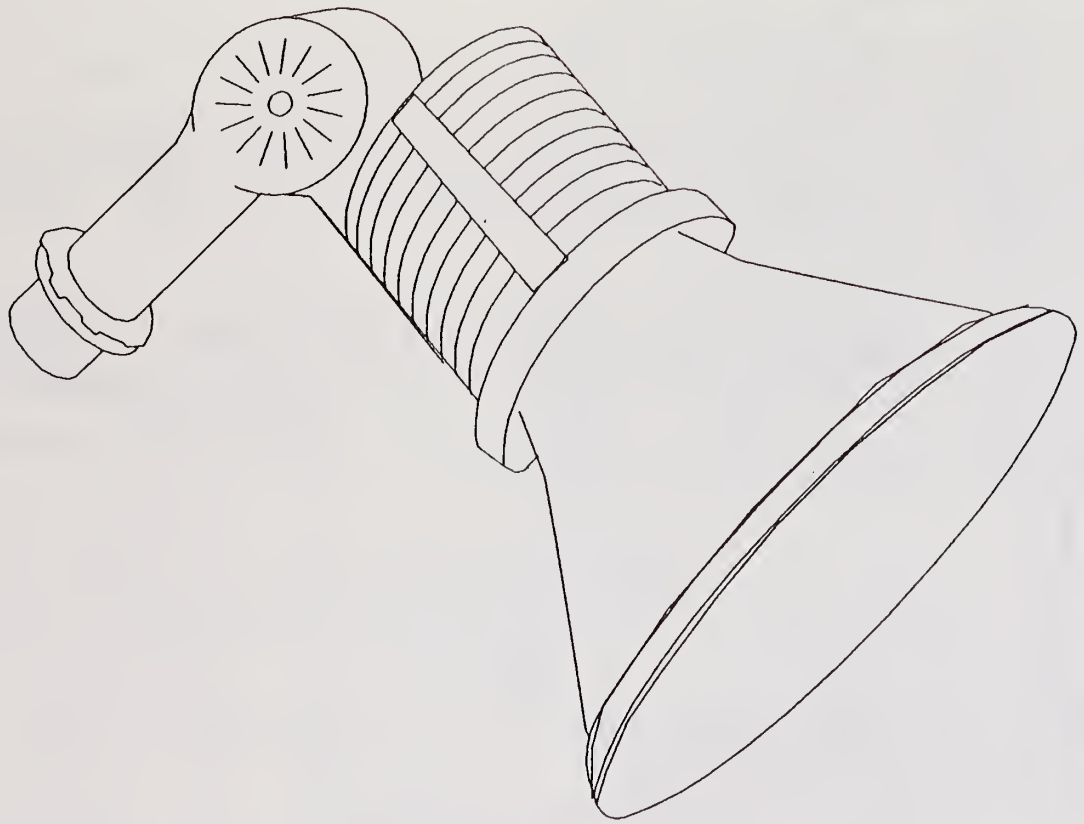
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FIXTURE SHALL BE OUTLET BOX MOUNTED. MINIMUM SHADE DIAMETER SHALL BE 18". SHADE SHALL BE OF NATURAL FINISH ASPEN OR WALNUT AND FIBERGLASS. TRIM SHALL BE POLISHED BRASS. PULLDOWN RANGE SHALL BE FROM 20" MINIMUM TO 44"–54" RANGE MAXIMUM SUSPENSION. FIXTURE SHALL BE EQUIPPED WITH THREE–WAY SWITCH. FIXTURE SHALL BEAR UL LABEL.

LAMP 3 – 60W

10-31-88

WAEATHERPROOF LAMPHOLDER

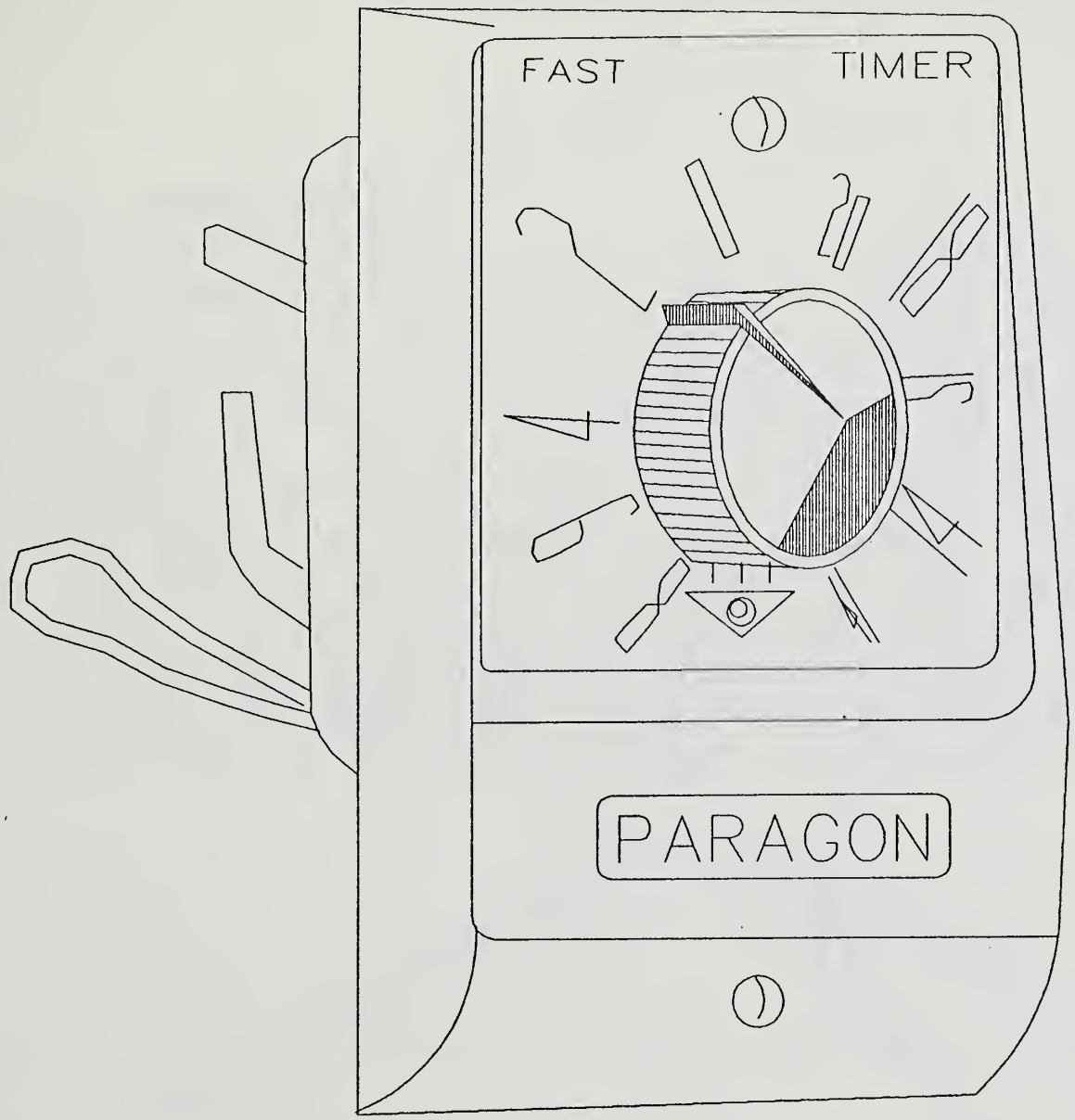


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THE FIXTURE SHALL BE DIE-CAST ALUMINUM, WEATHERPROOFED TO PROTECT THE LAMP BASE AND WIRING AREA. THERE SHALL BE SUFFICIENT EXERNALLY CAST RIBS FOR HEAT DISSIPATION. WEATHERPROOFING SHALL BE BY MEANS OF A LOCKED-IN-PLACE SILICONE RUBBER DIAPHRAM WHICH FIRMLY COMPRESSES AGAINST THE NECK OF THE LAMP TO PREVENT MOISTURE FROM ENTERING THE SOCKET AND WIRE AREA. THE SOCKET SHALL BE GLAZED HEAT-PROOF PORCELAIN WITH A COPPER NICKEL PLATED SCREW SHELL HAVING A SPRING-LOADED NICKEL PLATED CENTER TAB. THE WIRE LEADS SHALL BE UNSPLICED UL APPROVED OUT-DOOR WIRE WITH 9" EXCESS FOR LATER CONNECTION. THE SWIVEL ARM SHALL BE CAST ALUMINUM WITH INTERLOCKING TEETH FOR POSITIVE LOCKING AND CALIBRATED FOR 180 DEGREES. ALL HARDWARE SHALL BE EXTRA HEAVY PLATED. THE FIXTURE SHALL BEAR THE UL AND/OR C.S.A. LABEL. THE FIXTURE SHALL BE COMPLETE WITH BOX COVER FOR SINGLE ARM, AND FIXTURE NO 10. REQUIRES BOX COVER FOR DOUBLE ARM.

LAMPS	I-9	1 - 150W PAR 38
	I-10	1 - 150W PAR 38

10-25-88

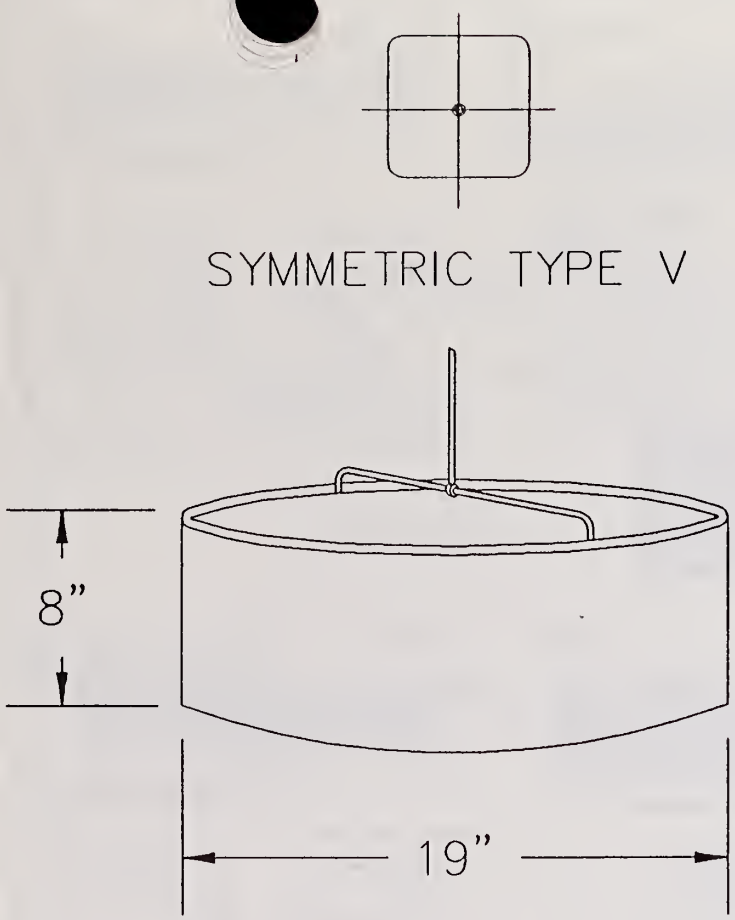


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FLUSH MOUNTED INTERVAL TIMER

THE TIMER SHALL BE 120V WITH 1600 WATT CAPACITY AND HAVE A DIAL RANGE FROM 0–15 MINUTES. TIMER SHALL BE UL APPROVED. DIAL GRADUATIONS 1/2 MINUTES.

TS–1
10–31–88



SYMMETRIC TYPE V

EFFECTIVE CEILING CAVITY REFLECTANCE–PERCENT																		
WALL		80				70				50			30			10		
REFLECTANCE		70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
ROOM CAVITY RATIO (RCR)	1	61	58	55	53	52	50	48	46	34	33	32	20	19	18	6	6	6
	2	55	50	47	43	47	43	40	37	30	28	26	17	16	15	5	5	5
	3	50	44	40	36	42	38	34	31	26	24	22	15	14	13	5	4	4
	4	46	39	34	30	39	33	29	26	23	20	18	13	12	11	4	4	4
	5	42	35	29	26	36	30	25	22	20	18	16	12	10	9	4	3	3
	6	38	31	26	22	33	26	22	19	18	15	13	11	9	8	3	3	3
	7	35	28	22	19	30	24	19	16	16	14	12	9	8	7	3	3	2
	8	33	25	20	16	28	21	17	14	15	12	10	9	7	6	3	2	2
	9	30	21	18	14	26	19	15	13	13	11	9	8	6	5	3	2	2
	10	28	20	16	13	24	18	14	11	12	10	8	7	6	5	2	2	2

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PENDANT MOUNT SYMMETRIC METAL HOUSING HALIDE LUMINAIRE WITH REMOTE BALLAST

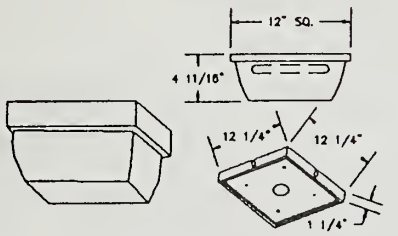
METAL HALIDE FIXTURE TO HAVE REMOTE HIGH POWER FACTOR BALLAST AND LUMINAIRE HOUSING TO BE ONE–PIECE SEAMLESS SPUN STEEL WITH SEALED OPTICAL CHAMBER. VOLTAGE TO BE AS SHOWN ON DRAWINGS. THE FIXTURE LENS TO BE THERMAL AND IMPACT RESISTANT GLASS, REFLECTOR TO BE HYDRO–FORMED ALUMINUM, GASKET WILL BE MADE OF OF EDM MATERIAL AND PAINT TO BE ELECTROSTATICALLY APPLIED BAKED ACRYLIC FINISH. EACH UNIT SHALL BE COMPLETELY WIRED AND EQUIPPED WITH ALL EQUIPMENT NEEDED FOR MOUNTING AND OPERATION.

THE COEFFECIENT OF UTILIZATION SHALL NOT BE LESS THAN .40 BASED ON A CEILING REFLECTANCE OF 70 PERCENT, WALL REFLECTANCE OF 30 PERCENT, FLOOR REFLECTANCE 20 PERCENT, AND A ROOM CAVITY RATIO OF 2.

FIXTURE SUPPORT STEM TO BE STEEL 1/2" OD AND CHROME–PLATED. FIXTURE TO BE STERNER/INLITE SERIES NO. AT 60 OR APPROVED EQUAL. VOLTAGE AS SHOWN ON DRAWINGS.

LAMP	10–24–88	1–400 WATT METAL HALIDE
BALLAST	MH–10	400 WATT M.H., H.P.F.

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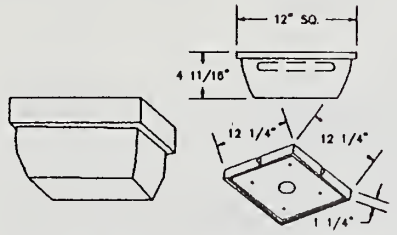


SURFACE CONDUIT ADAPTER

VANDALPROOF INTERIOR WALL OR CEILING MOUNTED 22W HPF

BASE PLATE SHALL BE CONSTRUCTED OF 14 GAUGE STEEL, WHITE BAKED ENAMEL FINISH AND FIXTURE SHALL BE FURNISHED WITH MAXIMUM SECURITY SCREWS AND SPECIAL SCREW DRIVER. FIXTURE SHALL BE EQUIPPED WITH CLEAR PLASTIC PRISMASTIC UNBREAKABLE DIFFUSER, COLD WEATHER TRANSFORMER -SELF START -NP0F AND WET LOCATION GASKET. FIXTURE SHALL BE UL APPROVED.

LAMP F-25 1 F C8T9 CIRCLINES
11-2-88

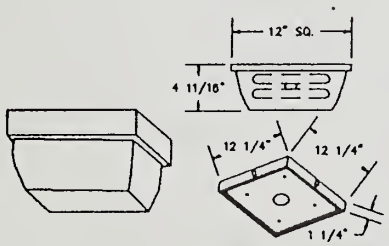


SURFACE CONDUIT ADAPTER

VANDALPROOF INTERIOR WALL OR CEILING MOUNTED 44W HPF

BASE PLATE SHALL BE CONSTRUCTED OF 14 GAUGE STEEL, BAKED ENAMEL FINISH AND FIXTURE SHALL BE FURNISHED WITH MAXIMUM SECURITY SCREWS AND SPECIAL SCREW DRIVER. FIXTURE SHALL BE EQUIPPED WITH CLEAR PLASTIC UNBREAKABLE DIFFUSER, ONE HPF-50'-120V -SELF START BALLAST AND GASKET. FIXTURE SHALL BE UL APPROVED.

LAMPS F-26 2 F C8T9 CIRCLINE
11-2-88



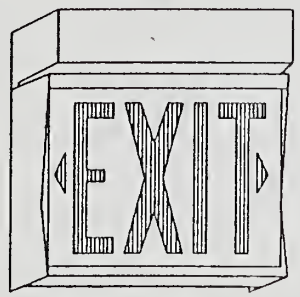
SURFACE CONDUIT ADAPTER

VANDALPROOF INTERIOR WALL OR CEILING MOUNTED 44W HPF

BASE PLATE SHALL BE CONSTRUCTED OF 14 GAUGE STEEL, WHITE BAKED ENAMEL FINISH AND FIXTURE SHALL BE FURNISHED WITH MAXIMUM SECURITY SCREWS AND SPECIAL SCREW DRIVER. FIXTURE SHALL BE EQUIPPED WITH CLEAR PLASTIC UNBREAKABLE DIFFUSER. COLD WEATHER TRANSFORMER -SELF START -NP0F AND WET LOCATION GASKET. FIXTURE SHALL BE UL APPROVED.

LAMPS F-24 2 F C8T9 CIRCLINES
11-2-88

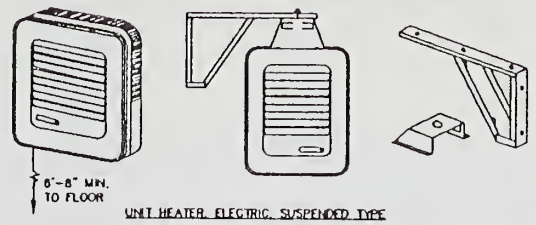
EXIT LIGHT



LINE VOLTAGE AND BATTERY POWERED EXIT LIGHT

FIXTURE SHALL HAVE EXTRUDED ALUMINUM ENDS AND 20 GAUGE DIE FORMED STEEL HOUSING AND FINISH TO BE BAKED SATIN ALUMINUM ENAMEL END CAPS AND MATTE BLACK HOUSING. POWER PACK SHALL BE TAMPER PROOF. PROVIDE SOLID STATE CHARGER, NICKEL CADIUM 6V BATTERY, TWO 8V MINIATURE BAYONET LAMPS, DOWN LIGHT, TEST SWITCH AND GREEN CHARGING INDICATOR. DIMENSIONS SHALL BE APPROXIMATELY 13 3/32" HIGH BY 13 5/16" WIDE BY 2 1/8" THICK AND BRACKET HANGER DEVICE SHALL BE SUITABLE FOR TOP, END OR BACK MOUNTING. FACE SHALL BE PLASTIC WITH 6" GREEN LETTERS.

LAMPS I-34 TWO(2) 8 VOLT LAMPS
11-3-88 BOARD INDICATOR LAMPS



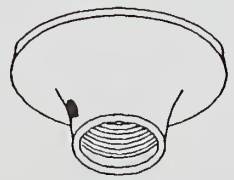
UNIT HEATER, ELECTRIC, SUSPENDED TYPE

HEATER SHALL BE HORIZONTAL TYPE AND BE ABLE TO BE CEILING OR WALL MOUNTED. THE CABINET SHALL BE MADE OF 18 GAUGE DIE FORMED STEEL AND HAVE INDIVIDUAL ADJUSTABLE LOUVERS WITH 30 DEGREE DOWNWARD STOPS. ALL METAL SURFACES OF THE UNIT SHALL BE PHOSPHATE COATED AND PAINTED BAKED ENAMEL. HEATER TO BE OF THE DRAW THROUGH AIR FLOW DESIGN WITH TOTALLY ENCLOSED, CONTINUOUS DUTY MOTOR WITH BUILT-IN THERMAL OVERLOAD. THE HEATING ELEMENTS SHALL HAVE A COPPER CLAD STEEL SHEATH AND ALUMINUM FINS. PROVIDE AUTOMATIC RESET THERMAL OVERHEAT PROTECTION WITH LINEAR CAPILLARY WIRED FOR INSTANTANOUS DE-ENERGIZING IN CASE OF THERMAL OVERLOAD. PROVIDE INTEGRAL THERMOSTAT OR REMOTE LOW VOLTAGE (24V) WALL MOUNTED THERMOSTAT IF SHOWN ON DRAWINGS.

HEATER SHALL BE UL LISTED, CHROMALOX SERIES MUH OF APPROVED EQUAL. VOLTAGE AND KW, AND PHASE AS SHOWN ON DRWAINGS.

H-6
11-3-88

PORCELAIN BASE

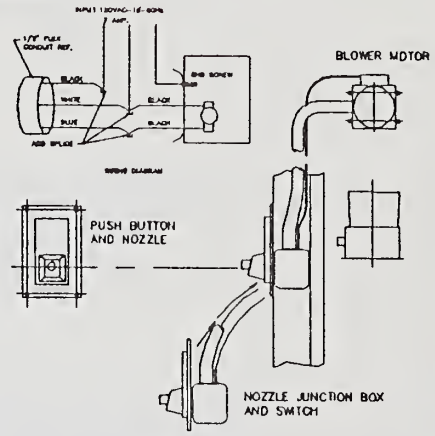


PORCELAIN PULL RECEPTACLE.BASE DIAMETER 4 1/2" DIAMETER. SHALL FIT EITHER 3 1/4" OR 4" OUTLET BOXES. 250 WATTS, 250 V WITH OR WITHOUT SHADE HOLDER GROOVES. FIXTURE SHALL BEAR UL LABEL.

FIXTURES SWITCHED SHALL BE LESS PULL CHAIN.

LAMP 11-2-88 1 - 100 W.
I-11

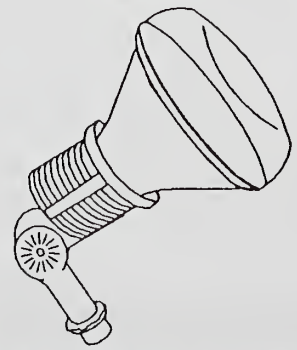
ALL BLOCKS IN THIS DRAWING WERE INSERTED 1 TO 1. THE D-SIZE DWG. WAS PLOTTED 1 TO 1.



HAND DRYER

PROVIDE AIR COMPRESSION TYPE HAND DRYER WITH REMOTE MOTOR UNIT. PUCH BUTTON SWITCH LOCATED IN CAST NOZZLE HOUSING WITH FLEXIBLE HOSE CONNECTING BLOWER MOTOR. HOUSING AND NOZZLE. NOZZLE HOUSING FITTING 4 INCH STUD WALL. POWER INPUT 120VAC, 60 Hz., 7 AMPS MAXIMUM.
E-40
11-3-88

ENCLOSED FLOODLIGHT



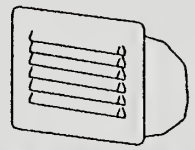
THE FIXTURE SHALL BE DIE-CAST ALUMINUM WITH FULLY ADJUSTABLE DIE-CAST ARM, PREWIRED GLAZED PORCELAIN SOCKLET IN AN INTEGRALLY-CAST PROTECTIVE HOUSING SEALED AGAINST WEATHER, INSECTS, AND OTHER DEBRIS, ELIMINATING SIDE AND BACK HALO LIGHT. VAPOR TIGHT LENS OF HEAT AND SHOCK-TEMPERED GLASS. LENS IS TO BE REMOVABLE FOR RELAMPING. FIXTURE AND LAMP SHALL BEAR THE UL LABEL FOR "WET LOCATIONS".

LAMPS I-35 150 WATT PAR-38 INCANDESCENT
11-2-88



LUMINAIRE SHALL BE A 25 1/4" DIAMTETER ALUMINUM REFLECTOR WITH 88% REFLECTANCE, WHITE BAKED ENAMEL FINISH COMBINED WITH A QUADATURE LENS AND A CLEAR TEMPERED GLASS ROUNDEL ABOVE. THE LENS AND GLASS SHALL BE SILICONE SEALED AT THE EDGES, HELD IN THE HINGED DOOR AND PROTECTED BY A WIRE GUARD. THE REFLECTOR SHALL BE ATTACH TO THE BALLAST ASSEMBLY BY ROTATING ONTO THREE SCREWS WITH MATCHING KEYHOLE SLOTS. WHEN THE SCREWS ARE TIGHTENED AND THE REFLECTOR DOOR IS IN PLACE. THE OPTICAL ASSEMBLY SHALL BECOME TOTALLY ENCLOSED. THE OVERALL MOUNTING HEIGHT OF THE UNIT SHALL NOT EXCEED 25 FEET, WITH A SPACING TO MOUNTING HEIGHT RATIO OF 1.3 TO 2.5. THE COMPLETE LUMINAIRE SHALL BE U.L. LISTED. THE LUMINAIRE WILL HAVE A C.U. = .80 WITH THE RCR = 2.0, AND THE REFLECTANCE OF THE FLOOR = 20% CEILING = 70%, AND WALL = 20%

LAMP VOLTAGE 277 11-7-88 250W COLORED IMPROVED
BALLAST - REGULATOR HPS-5 HIGH PRESSURE SODIUM



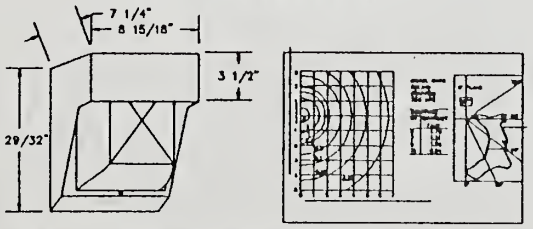
RECESSED NIGHT LIGHT

AISLE, STEP, OR NIGHT LIGHT - RECESSED. 120 VOLTS, A.C. ONE A-19 LAMP. 40 WATTS MAXIMUM. SATIN FINISH LOUVERED FRAME. APPROXIMATELY 7" WIDE, 8 7/16" HIGH, 3" DEEP.

I-33
11-3-88

EFFECTIVE CEILING CAVITY REFLECTANCE-PERCENT

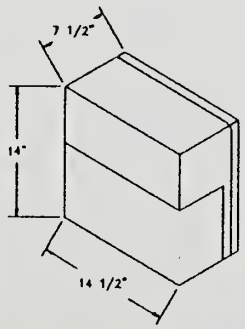
WALL	80				70				50				30				10			
REFLECTANCE	70	50	30	10	70	50	30	10	50	30	10	0	50	30	10	0	50	30	10	0
ROOM CAVITY RATIO (RCR)	1	81	58	38	83	58	38	48	48	34	22	32	20	14	9	6	6	4	3	4
	2	66	42	27	43	42	27	32	32	24	16	21	14	10	7	4	4	3	2	3
	3	54	31	19	36	31	19	23	23	17	11	15	10	7	5	3	3	2	1	2
	4	45	24	14	30	24	14	18	18	13	8	11	8	5	3	2	2	1	1	1
	5	38	19	10	25	19	10	14	14	10	6	8	6	4	2	1	2	1	1	1
	6	32	15	8	21	15	8	11	11	8	5	7	5	3	2	1	1	1	0	1
	7	27	12	6	18	12	6	9	9	6	4	5	4	2	1	1	1	0	0	0
	8	23	10	5	15	10	5	7	7	5	3	4	3	2	1	0	1	0	0	0
	9	20	8	4	13	8	4	6	6	4	2	3	3	1	1	0	0	0	0	0
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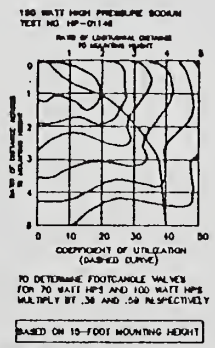


THE LUMINAIRE SHALL CONSIST OF AN 18 GAUGE COLD ROLLED STEEL HOUSING. SEAM WELDED FOR WEATHER PROOF SEAL AND HAVE A BAKED ENAMEL FINISH. DIFFUSER SHALL BE AN INDESTRUCTIBLE CLEAR PRISMATIC LENS AND REFLECTOR SHALL BE ANODIZED ALUMINUM. UNIT SHALL ALSO INCLUDE ONE HIGH PRESSURE SODIUM BALLAST. HARDWARE SHALL INCLUDE TAMPERPROOF SCREW.

LUMINAIRE TO BE KENALL MODEL NO. 5475-MSP OR APPROVED EQUAL

BALLAST 11-2-88
VOLTAGE HPS-7 70W HPS, LU70/D/MED
AS SHOWN ON DRAWINGS





EXTERIOR HIGH PRESSURE SODIUM LUMINAIRE SUITABLE FOR WET LOCATIONS

HIGH PRESSURE SODIUM FIXTURE WITH BALLAST, SHALL BE CLASS "H" INSULATED -2D DEGREES F STARTING, 60 Hz. REGULATED HIGH POWER FACTOR TYPE. UNIT SHALL BE UL LISTED AS "SUITABLE FOR WET LOCATIONS."

BACK HOUSING SHALL BE ONE-PIECE DIE-CAST ALUMINUM. FRONT ACCESS DOOR AND PRISMATIC LENS SHALL BE ONE-PIECE, VANDAL RESISTANT INJECTION MOLDED U.V. STABILIZED POLYCARBONATE. FURNISH HUBBELL PENMALITER CAT NO. PVL-01005-11X OR APPROVED EQUAL

FURNISH WITH PHOTOCONTROL

LAMP 1-100W HIGH PRESSURE SODIUM LAMP, BT-25 CLASS H, -2D DEGREE STARTING

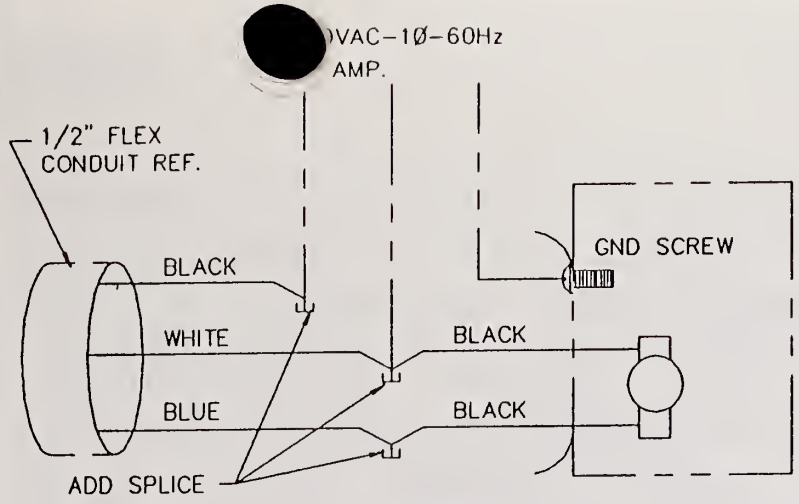
EFXCS005
11-7-88

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

ELECTRICAL FIXTURE CUT SHEETS

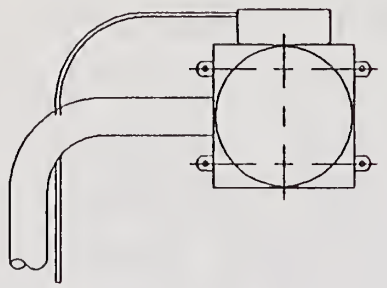
DRAWN DATE
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

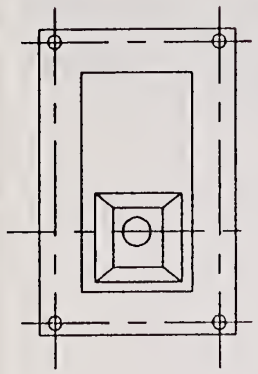
EFXC 5 SHT. 5 OF 10



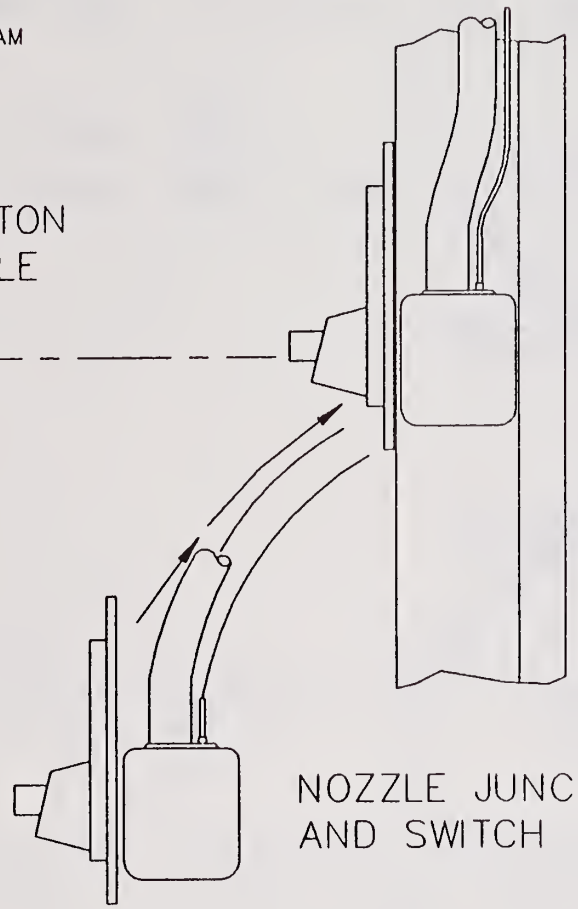
WIRING DIAGRAM

BLOWER MOTOR

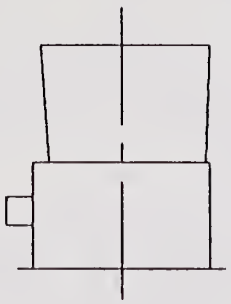




PUSH BUTTON
AND NOZZLE



NOZZLE JUNCTION BOX
AND SWITCH

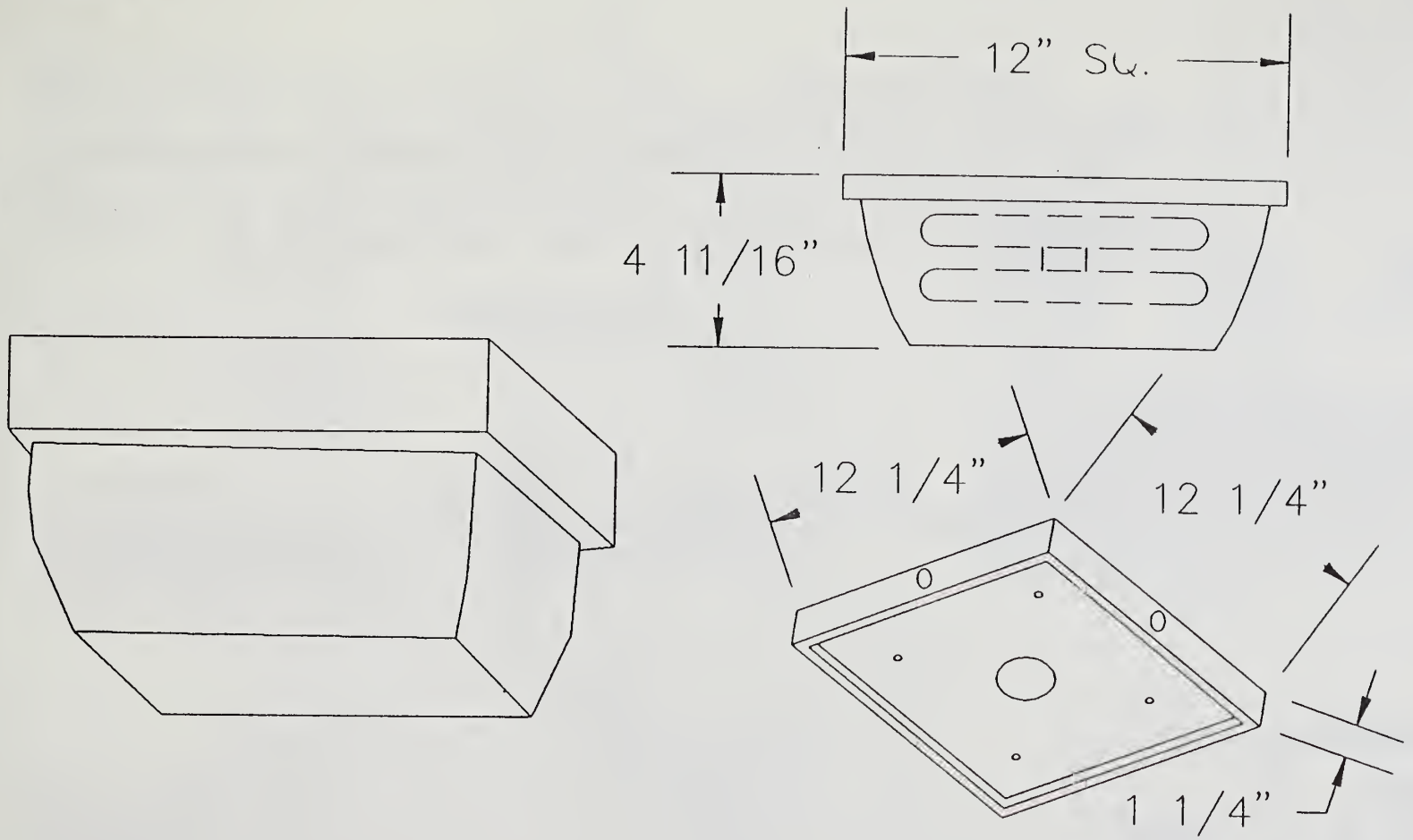


HAND DRYER

PROVIDE AIR COMPRESSION TYPE HAND DRYER WITH REMOTE MOTOR UNIT. PUCH BUTTON SWITCH LOCATED IN CAST NOZZLE HOUSING WITH FLEXIBLE HOSE CONNECTING BLOWER MOTOR, HOUSING AND NOZZLE. NOZZLE HOUSING FITTING 4 INCH STUD WALL. POWER INPUT 120VAC, 60 Hz., 7 AMPS MAXIMUM.

E–40
11–5–88

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SURFACE CONDUIT ADAPTER

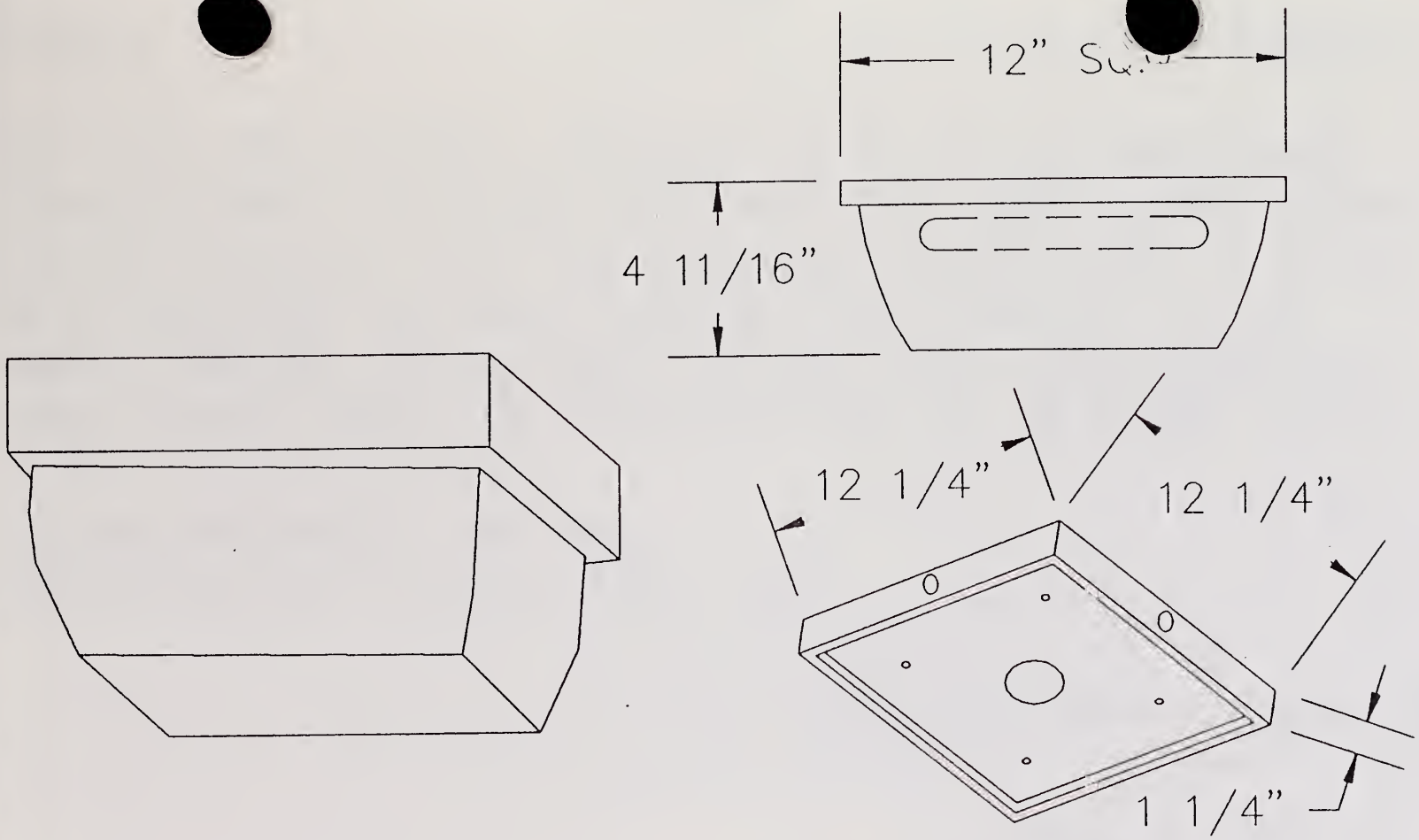
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VANDALPROOF INTERIOR WALL OR
CEILING MOUNTED 44W HPF

BASE PLATE SHALL BE CONSTRUCTED OF 14 GAUGE STEEL, WHITE BAKED ENAMEL FINISH AND FIXTURE SHALL BE FURNISHED WITH MAXIMUM SECURITY SCREWS AND SPECIAL SCREW DRIVER. FIXTURE SHALL BE EQUIPPED WITH CLEAR PLASTIC PRIMASTIC UNBREAKABLE DIFFUSER, COLD WEATHER TRANSFORMER –SELF START –NP6F AND WET LOCATION GASKET. FIXTURE SHALL BE UL APPROVED.

LAMPS F–24 2 F C8T9 CIRCLINES

11–2–88



SURFACE CONDUIT ADAPTER

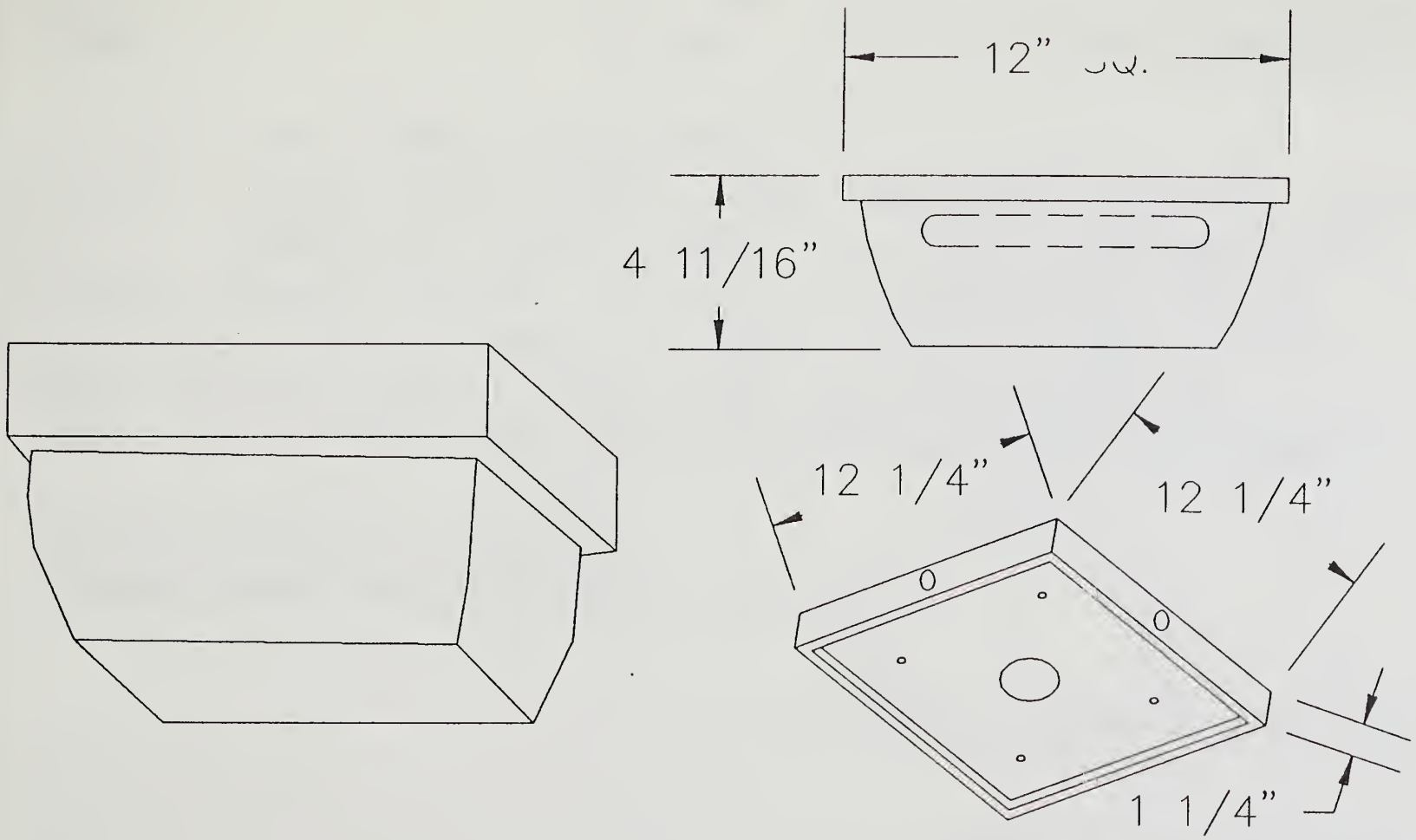
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VANDALPROOF INTERIOR WALL OR
CEILING MOUNTED 22W HPF

BASE PLATE SHALL BE CONSTRUCTED OF 14 GAUGE STEEL, WHITE BAKED ENAMEL FINISH AND FIXTURE SHALL BE FURNISHED WITH MAXIMUM SECURITY SCREWS AND SPECIAL SCREW DRIVER. FIXTURE SHALL BE EQUIPPED WITH CLEAR PLASTIC PRIMASTIC UNBREAKABLE DIFFUSER, COLD WEATHER TRANSFORMER –SELF START –NP6F AND WET LOCATION GASKET. FIXTURE SHALL BE UL APPROVED.

LAMP	F–25	1 F C8T9 CIRCLINES

11–2–88



SURFACE CONDUIT ADAPTER

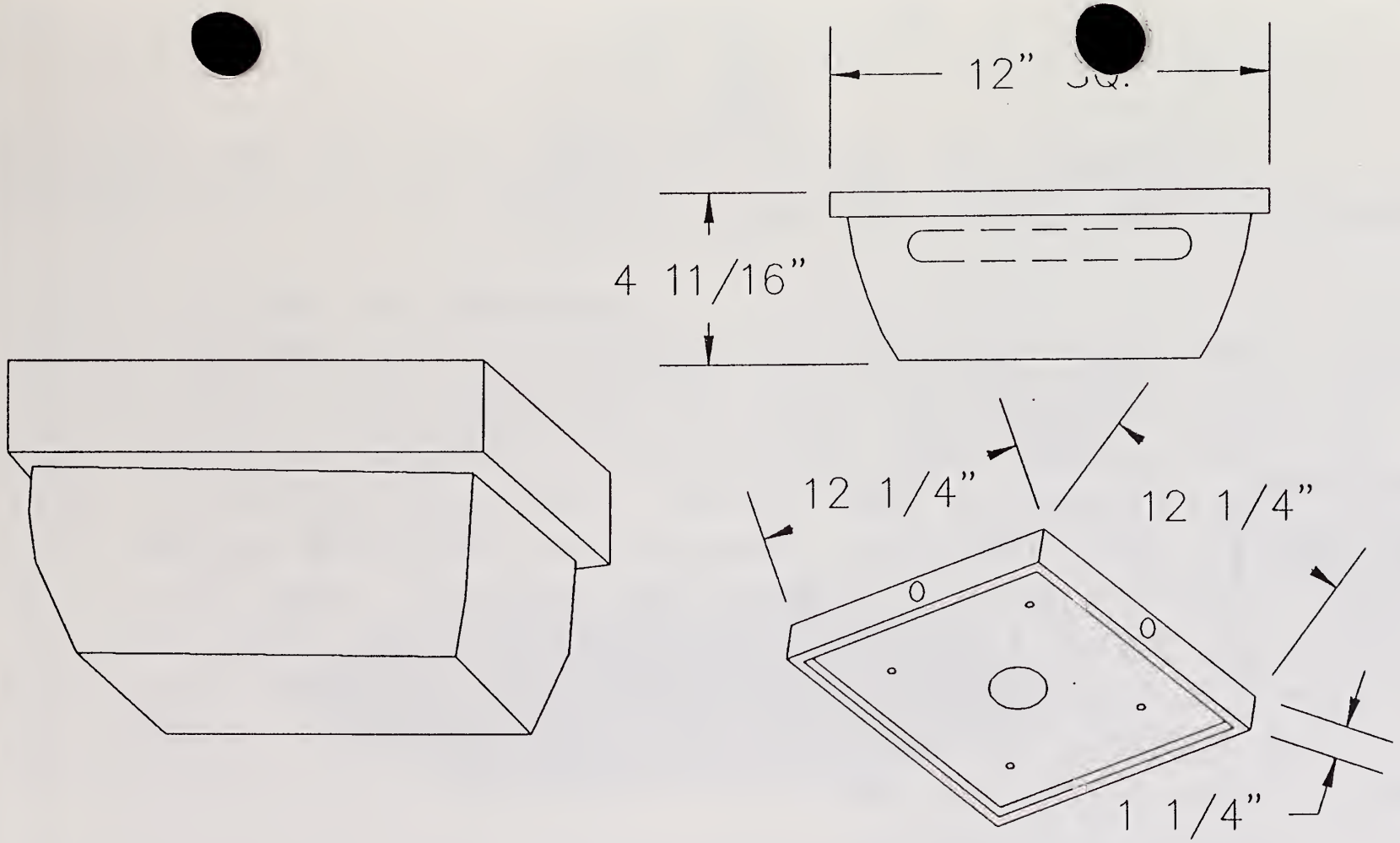
VANDALPROOF INTERIOR WALL OR
CEILING MOUNTED 44W HPF

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

BASE PLATE SHALL BE CONSTRUCTED OF 14 GAUGE STEEL, BAKED ENAMEL FINISH AND FIXTURE SHALL BE FURNISHED WITH MAXIMUM SECURITY SCREWS AND SPECIAL SCREW DRIVER. FIXTURE SHALL BE EQUIPPED WITH CLEAR PLASTIC UNBREAKABLE DIFFUSER, ONE HPF-50°-120V -SELF START BALLAST AND GASKET. FIXTURE SHALL BE UL APPROVED.

LAMPS 2 F [illegible] CIRCLINE

F-26
11-2-88



SURFACE CONDUIT ADAPTER

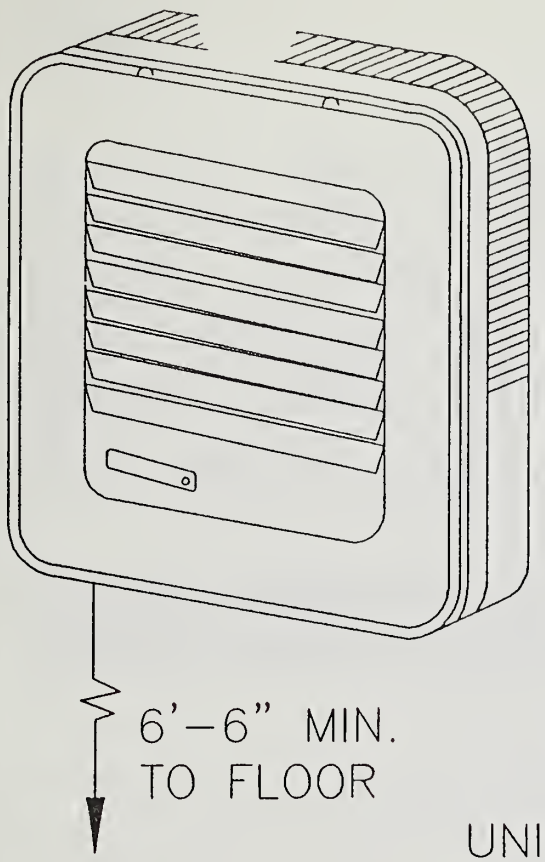
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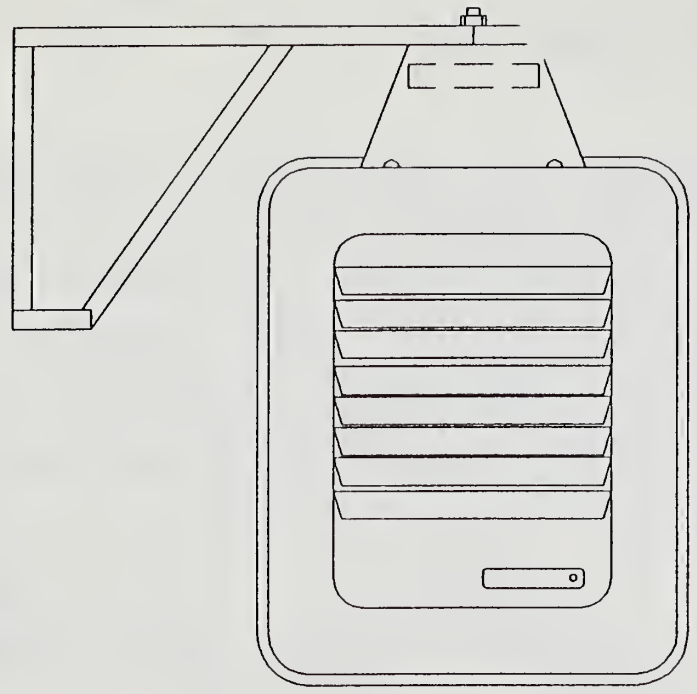
VANDALPROOF INTERIOR WALL OR
CEILING MOUNTED 22W HPF

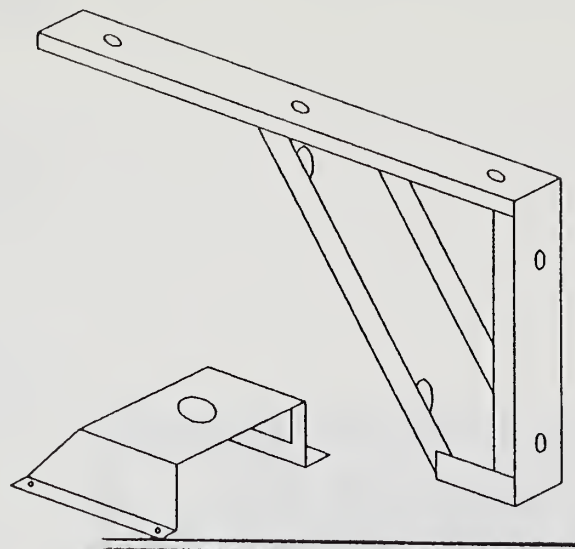
BASE PLATE SHALL BE CONSTRUCTED OF 14 GAUGE STEEL, BAKED ENAMEL FINISH AND FIXTURE SHALL BE FURNISHED WITH MAXIMUM SECURITY SCREWS AND SPECIAL SCREW DRIVER. FIXTURE SHALL BE EQUIPPED WITH CLEAR PLASTIC UNBREAKABLE DIFFUSER, ONE HPF-50°-120V -SELF START BALLAST AND GASKET. FIXTURE SHALL BE UL APPROVED.

LAMP	F-27	1 F C8T9 CIRCLINE

11-2-88







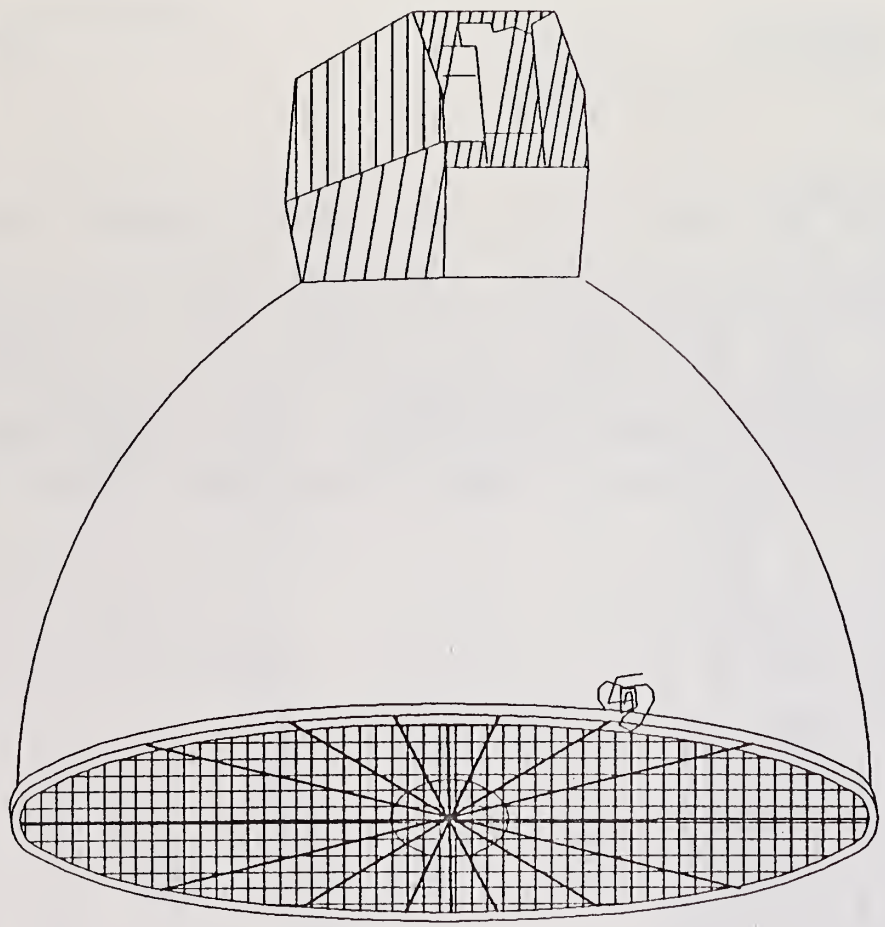
THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

UNIT HEATER, ELECTRIC, SUSPENDED TYPE

HEATER SHALL BE HORIZONTAL TYPE AND BE ABLE TO BE CEILING OR WALL MOUNTED. THE CABINET SHALL BE MADE OF 18 GAUGE DIE FORMED STEEL AND HAVE INDIVIDUAL ADJUSTABLE LOUVERS WITH 30 DEGREE DOWNWARD STOPS. ALL METAL SURFACES OF THE UNIT SHALL BE PHOTPHATE COATED AND PAINTED BAKED ENAMEL. HEATER TO BE OF THE DRAW THROUGH AIR FLOW DESIGN WITH TOTALLY ENCLOSED, CONTINUOUS DUTY MOTOR WITH BUILT–IN THERMAL OVERLOAD. THE HEATING ELEMENTS SHALL HAVE A COPPER CLAD STEEL SHEATH AND ALUMINUM FINS. PROVIDE AUTOMATIC RESET THERMAL OVERHEAT PROTECTION WITH LINEAR CAPILLARY WIRED FOR INSTANTANOUS DE–ENERGIZING IN CASE OF THERMAL OVERLOAD. PROVIDE IN–TEGRAL THERMOSTAT OR REMOTE LOW VOLTAGE (24V) WALL MOUNTED THERMO STAT IF SHOWN ON DRAWINGS.

HEATER SHALL BE UL LISTED, CHROMALOX SERIES MUH OF APPROVED EQUAL. VOLTAGE AND KW, AND PHASE AS SHOWN ON DRWAINGS.

11-3-88

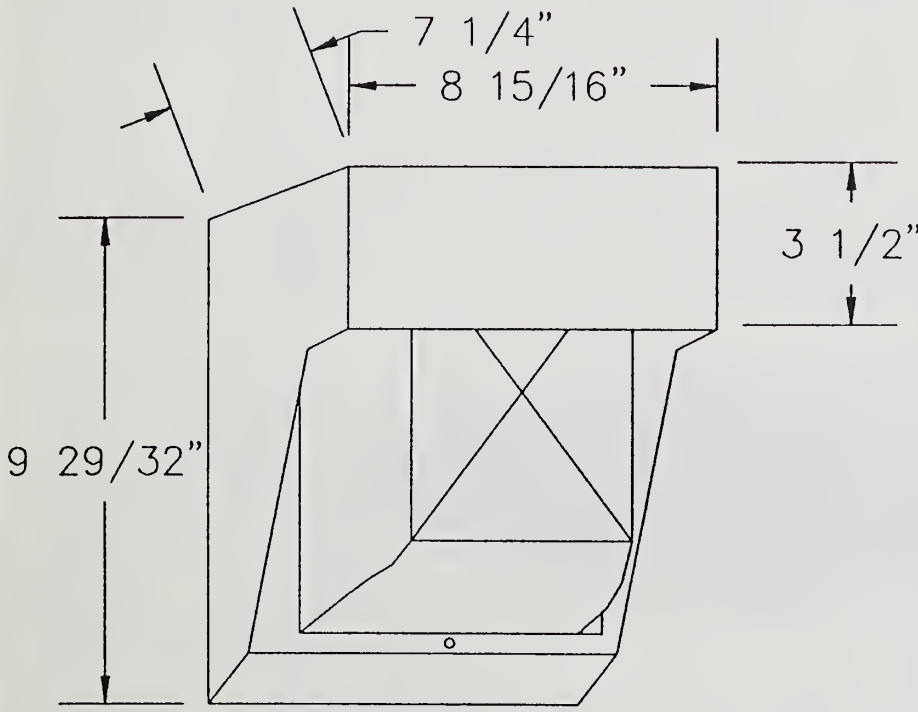


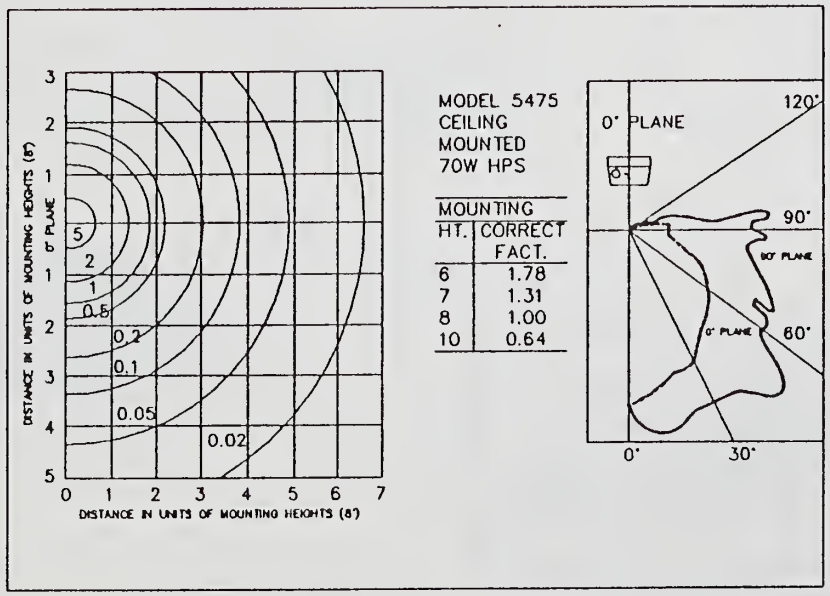
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LUMINAIRE SHALL BE A 25 1/4" DIAMTETER ALUMINUM REFLECTOR WITH 88% REFLECTANCE, WHITE BAKED ENAMEL FINISH COMBINED WITH A QUADATURE LENS AND A CLEAR TEMPERED GLASS ROUNDEL ABOVE. THE LENS AND GLASS SHALL BE SILICONE SEALED AT THE EDGES, HELD IN THE HINGED DOOR AND PROTECTED BY A WIRE GUARD. THE REFLECTOR SHALL BE ATTACH TO THE BALLAST ASSEMBLY BY ROTATING ONTO THREE SCREWS WITH MATCHING KEYHOLE SLOTS. WHEN THE SCREWS ARE TIGHTENED AND THE REFLECTOR DOOR IS IN PLACE, THE OPTICAL ASSEMBLY SHALL BECOME TOTALLY ENCLOSED. THE OVERALL MOUNTING HEIGHT OF THE UNIT SHALL NOT EXCEED 25 FEET, WITH A SPACING TO MOUNTING HEIGHT RATIO OF 1.3 TO 2.5. THE COMPLETE LUMINAIRE SHALL BE U.L. LISTED. THE LUMINAIRE WILL HAVE A C.U. = .60 WITH THE RCR = 2.0, AND THE REFLECTANCE OF THE FLOOR = 20%, CEILING = 70%, AND WALL = 20%.

LAMP VOLTAGE 277	11-7-88	250W COLORED IMPROVED
BALLAST - REGULATOR	HPS-5	HIGH PRESSURE SODIUM

EFFECTIVE CEILING CAVITY REFL		NCE–PERCENT																
WALL		80				70				50			30			10		
REFLECTANCE		70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
ROOM CAVITY RATIO (RCR)	1	61	58	55	53	52	50	48	46	34	33	32	20	19	18	6	6	6
	2	55	50	47	43	47	43	40	37	30	28	26	17	16	15	5	5	5
	3	50	44	40	36	42	38	34	31	26	24	22	15	14	13	5	4	4
	4	46	39	34	30	39	33	29	26	23	20	18	13	12	11	4	4	4
	5	42	35	29	26	36	30	25	22	20	18	16	12	10	9	4	3	3
	6	38	31	26	22	33	26	22	19	18	15	13	11	9	8	3	3	3
	7	35	28	22	19	30	24	19	16	16	14	12	9	8	7	3	3	2
	8	33	25	20	16	28	21	17	14	15	12	10	9	7	6	3	2	2
	9	30	21	18	14	26	19	15	13	13	11	9	8	6	5	3	2	2
	10	28	20	16	13	24	18	14	11	12	10	8	7	6	5	2	2	2





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THE LUMINAIRE SHALL CONSIST OF AN 18 GAUGE COLD ROLLED STEEL HOUSING, SEAM WELDED FOR WEATHER PROOF SEAL AND HAVE A BAKED ENAMEL FINISH. DIFFUSER SHALL BE AN INDESTRUCTIBLE CLEAR PRISMATIC LENS AND REFLECTOR SHALL BE ANODIZED ALUMINUM. UNIT SHALL ALSO INCLUDE ONE HIGH PRESSURE SODIUM BALLAST. HARDWARE SHALL INCLUDE TAMPERPROOF SCREW.

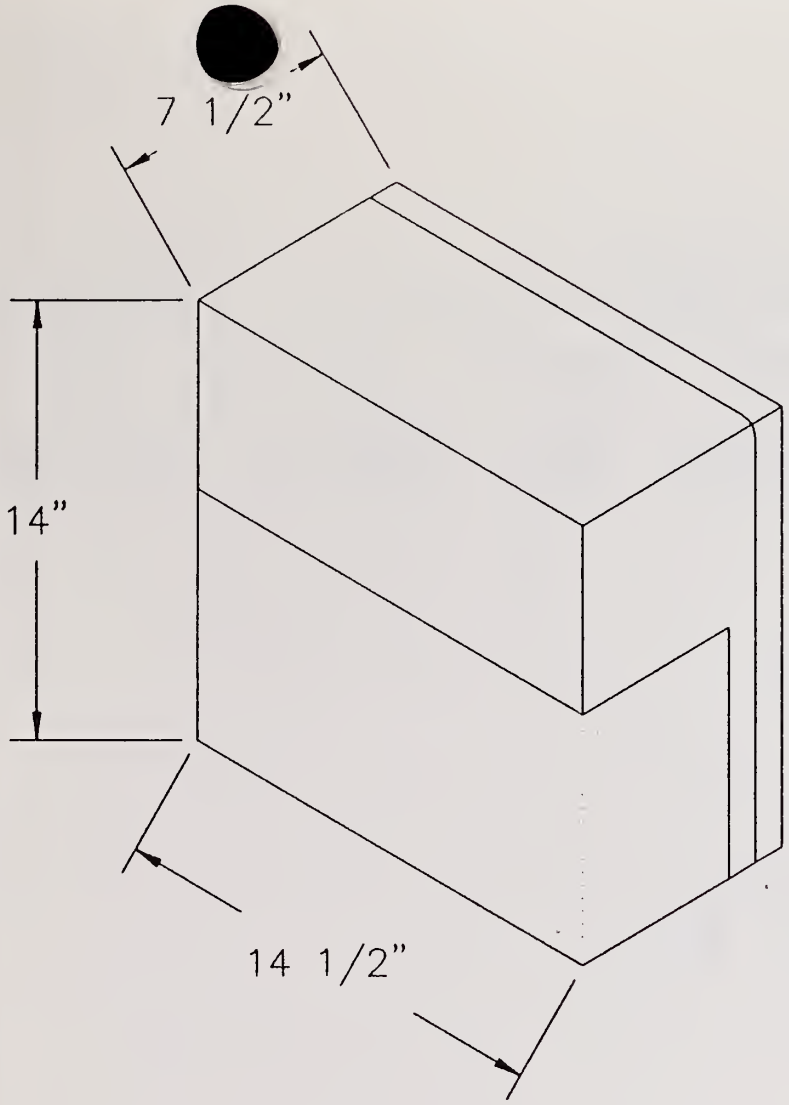
LUMINAIRE TO BE KENALL MODEL NO. 5475–MSP OR APPROVED EQUAL.

BALLAST
VOLTAGE
AS SHOWN ON DRAWINGS

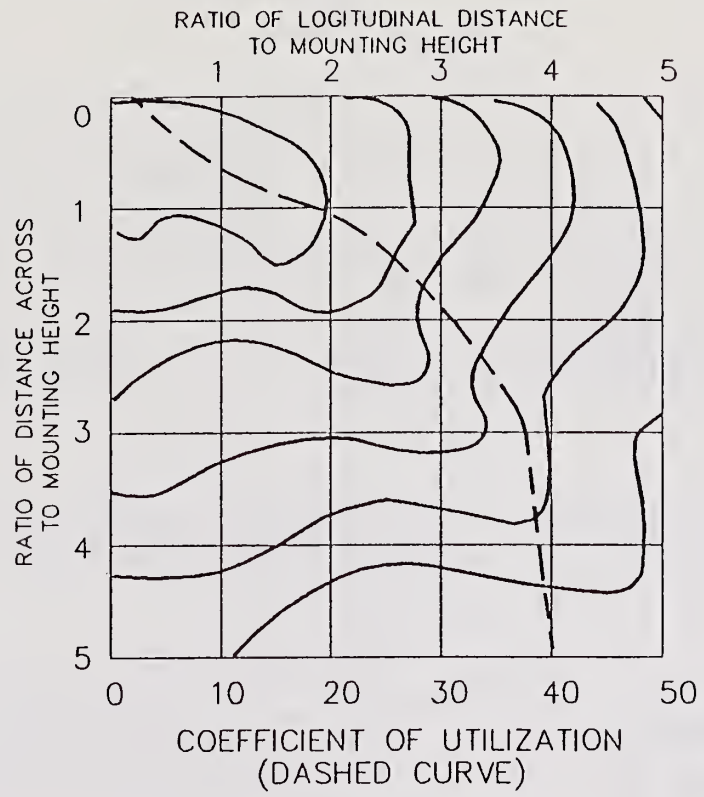
11–2–88
HPS–7

70W HPS, LU70/D/MED

VOLTAGE
AS SHOWN ON DRAWINGS



150 WATT HIGH PRESSURE SODIUM
TEST NO. HPS-8146



TO DETERMINE FOOTCANDLE VALVES FOR 70 WATT HPS AND 100 WATT HPS MULTIPLY BT .36 AND .59 RESPECTIVELY

BASED ON 15-FOOT MOUNTING HEIGHT

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

EXTERIOR HIGH PRESSURE SODIUM LUMINAIRE SUITABLE FOR WET LOCATIONS

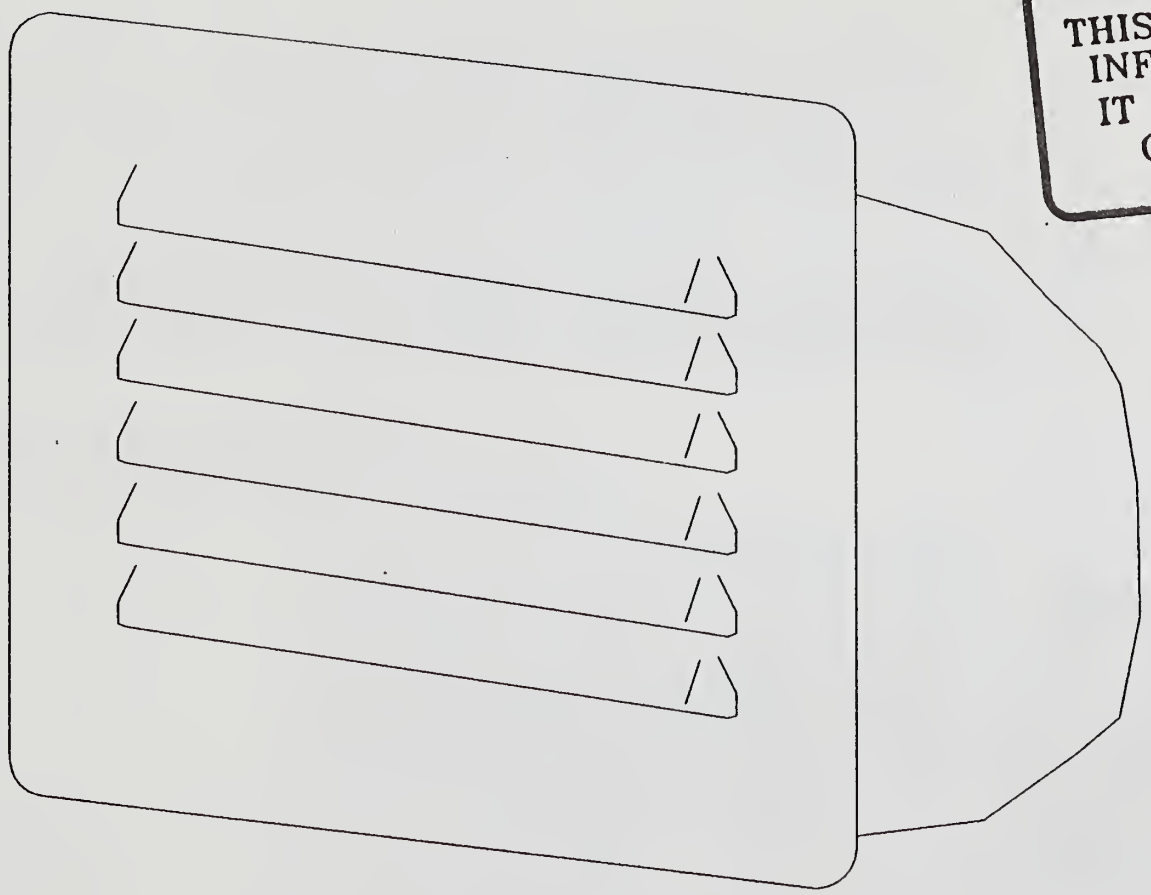
HIGH PRESSURE SODIUM FIZTURE WITH BALLAST. SHALL BE CLASS "H" INSULATED -20 DEGREES F STARTING, 60 Hz. REGULATED HIGH POWER FACTOR TYPE. UNIT SHALL BE UL LISTED AS "SUITABLE FOR WET LOCATIONS."

BACK HOUSING SHALL BE ONE-PIECE DIE-CAST ALUMINUM. FRONT ACCESS DOOR AND PRIMASTIC LENS SHALL BE ONE-PIECE, VANDAL RESISTANT INJECTION MOLDED U.V. STABILIZED POLYCARBONATE. FURNISH HUBBELL PERMALITER CAT. NO. PVL-01005-11X OR APPROVED EQUAL.

FURNISH WITH PHOTOCONTROL

LAMP	1-100W HIGH PRESSURE SODIUM
11-3-88	LAMP, BT-25
HPS-8	CLASS H, -20 DEGREE STARTING

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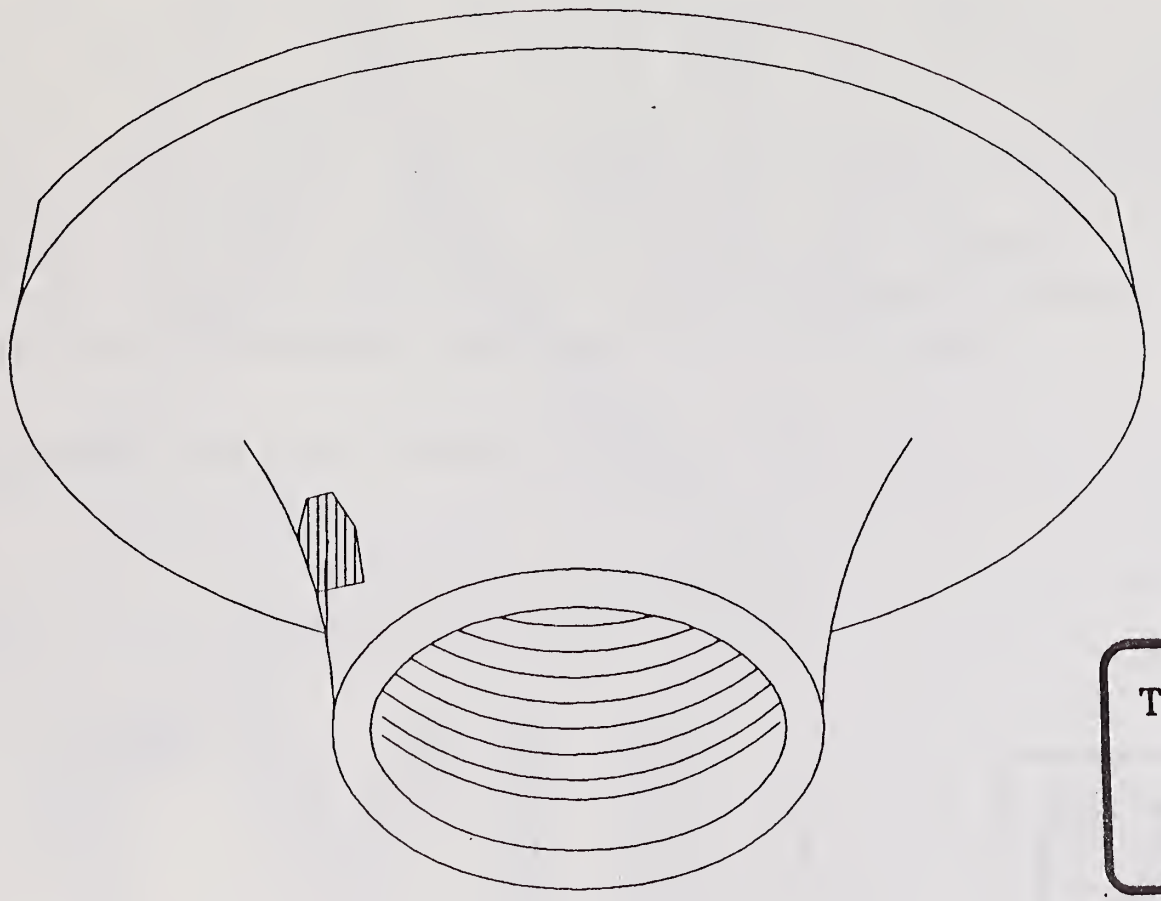


RECESSED NIGHT LIGHT

AISLE, STEP, OR NIGHT LIGHT – RECESSED. 120 VOLTS, A.C. ONE A–19 LAMP, 40 WATTS MAXIMUM. SATIN FINISH LOUVERED FRAME. APPROXIMATELY 7" WIDE, 6 7/16" HIGH, 3" DEEP.

11 - 88

PORCELAIN BASE



THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

PORCELAIN PULL RECEPTACLE.BASE DIAMETER 4 1/2" DIAMETER. SHALL FIT EITHER 3 1/4" OR 4" OUTLET BOXES. 250 WATTS, 250 V WITH OR WITHOUT SHADE HOLDER GROOVES. FIXTURE SHALL BEAR UL LABEL.

FIXTURES SWITCHED SHALL BE LESS PULL CHAIN.

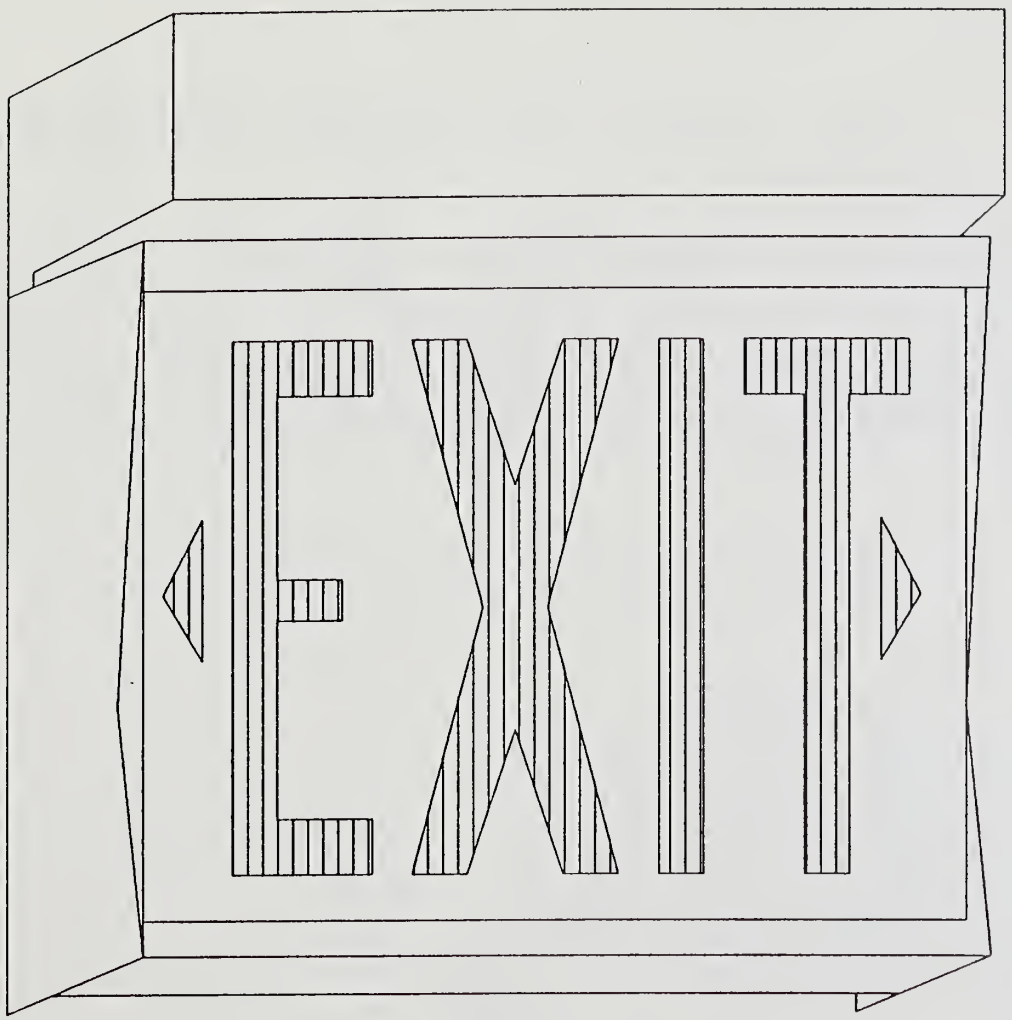
LAMP

11-2-88

I-11

1 - 100 W.

EXIT LIGHT



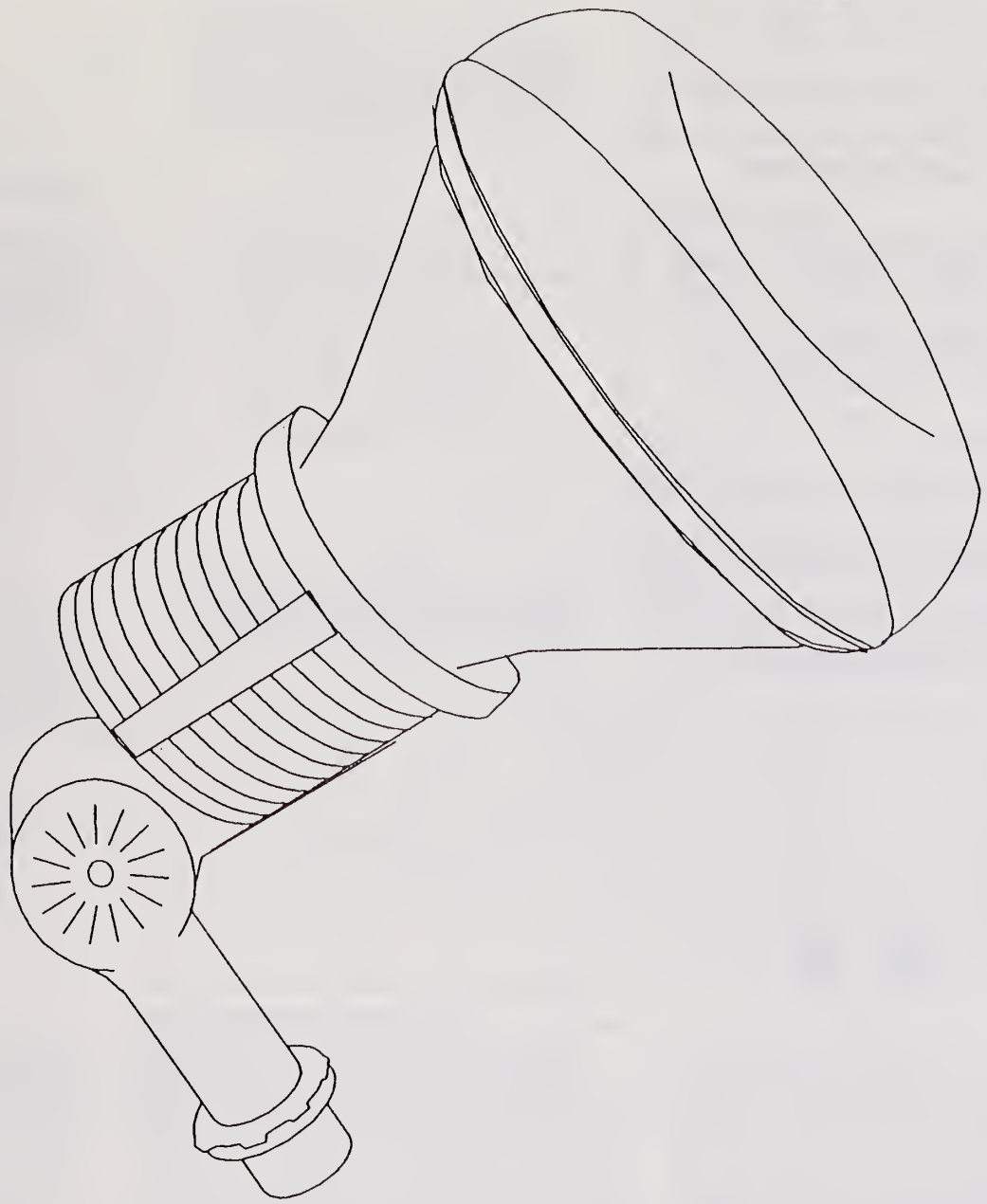
THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

LINE VOLTAGE AND BATTERY POWERED EXIT LIGHT

FIXTURE SHALL HAVE EXTRUDED ALUMINUM ENDS AND 20 GAUGE DIE FORMED STEEL HOUSING AND FINISH TO BE BAKED SATIN ALUMINUM ENAMEL END CAPS AND MATTE BLACK HOUSING. POWER PACK SHALL BE TAMPER PROOF. PROVIDE SOLID STATE CHARGER, NICKEL CADIUM 6V BATTERY, TWO 6V MINIATURE BAYONET LAMPS, DOWN LIGHT, TEST SWITCH AND GREEN CHARGING INDICATOR. DIMENSIONS SHALL BE APPROXIMATELY 13 3/32" HIGH BY 13 5/16" WIDE BY 2 1/8" THICK AND BRACKET HANGER DEVICE SHALL BE SUITABLE FOR TOP, END OR BACK MOUNTING. FACE SHALL BE PLASTIC WITH 6" GREEN LETTERS.

LAMPS — TWO(2) 6 VOLT LAMPS
F[illegible]RD INDICATOR LAMPS

ENCLOSED FLOODLIGHT

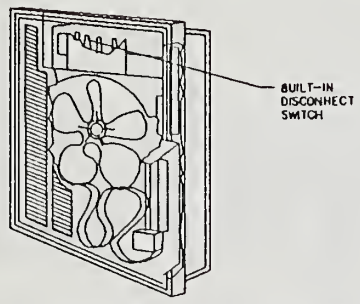


THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

THE FIXTURE SHALL BE DIE-CAST ALUMINUM WITH FULLY ADJUSTABLE DIE-CAST ARM. PREWIRED GLAZED PORCELAIN SOCKLET IN AN INTEGRALLY-CAST PROTECTIVE HOUSING SEALED AGAINST WEATHER, INSECTS, AND OTHER DEBRIS, ELIMINATING SIDE AND BACK HALO LIGHT. VAPOR TIGHT LENS OF HEAT AND SHOCK-TEMPERED GLASS. LENS IS TO BE REMOVABLE FOR RELAMPING. FIXTURE AND LAMP SHALL BEAR THE UL LABEL FOR "WET LOCATIONS".

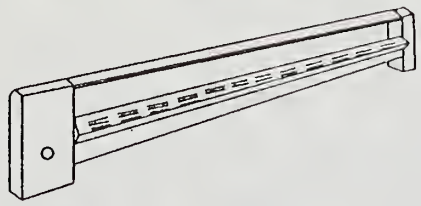
LAMPS	I-35 11-2-88	150 WATT PAR-38 INCANDESCENT

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.



HEATER SHALL BE A WALL INSERT TYPE HEATER, WITH WALL BOX FOR RECESSED MOUNTING IN 2" X 4" X 16" O.C. STUD SPACE. SURFACE MOUNT WALL BOX SHALL BE FURNISHED FOR MOUNTING ON FINISHED WALL WHERE SHOWN. UNIT SHALL HAVE METAL SHEATHED, FINNED TUBE HEATING ELEMENTS AND SHALL BE EQUIPPED WITH AUTOMATIC LINE VOLTAGE RESET THERMAL OVERHEAT SWITCH. FAN MOTOR SHALL BE TOTALLY ENCLOSED, PERMANENTLY LUBRICATED WITH INTEGRAL OVER-LOAD PROTECTION. FAN MOTOR CIRCUIT SHALL HAVE DELAY-ON-DE-ENERGIZATION SWITCH. FAN SHALL HAVE A MINIMUM OF 170 CFM OUTPUT. UNIT SHALL BE EQUIPPED WITH INTEGRAL, OR REMOTE (LOW VOLTAGE RELAY CONTROL), DAY-NIGHT TAMPER PROOF THERMOSTAT AND ON-OFF SWITCH AS SPECIFIED ON PLANS. TAMPER PROOF, 18 GAUGE RIBBED GRILLE SHALL BE DOWNFLOW-LOUVERED. UNIT SHALL BE OF KW SIZE AND VOLTAGE SPECIFIED ON PLANS. FINISH SHALL BE BAKED ENAMEL OR ANODIZED ALUMINUM. ALL CONTROLS SHALL BE INTERNALLY MOUNTED AND NOT ACCESSIBLE FROM FRONT COVER.

H-7
11-25-88



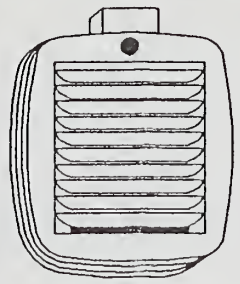
ELECTRIC BASEBOARD HEATER

UNIT SHALL BE CONVECTION TYPE APPROVED FOR WALL MOUNTING AND PROVIDED WITH MEANS FOR SECURELY FASTENING ALL SECTIONS OF BASEBOARDS TOGETHER WITH ALL ACCESSORIES TO FORM A CONTINUOUS AND COMPLETE INSTALLATION. ALL UNITS AND DEVICES SHALL BE APPROVED AND LISTED BY UNDERWRITERS LABORATORIES. HEATING ELEMENTS SHALL BE CLOSED TYPE, METAL SHEATHED IN NON-CORROSIVE MATERIAL OF LOW-MASS TYPE DESIGNED FOR MINIMUM RISE OF 90° F. AT 100 FPM. RESISTANCE WIRE SHALL BE NIKEL-CHROME ALLOY. ELEMENTS SHALL HAVE A CAPACITY OF 250 WATTS MINIMUM PER LINEAL FOOT AT 240 VOLTS A.C., AND SHALL NOT VARY IN EXCESS OF PLUS OR MINUS 5 PERCENT. FRONT PANEL SHALL BE 20 GAUGE MINIMUM SUPPORTED AT 16-INCH MAXIMUM INTERVALS. HEATER BODY SHALL BE ONE PEICE 22 GAUGE MINIMUM INTEGRAL BAFFLE SHALL PROVIDE A SCREEN GUARD OVER ELEMENT OR UNIT SHALL BE SO DESIGNED AS TO PREVENT A 1/4" X 3" PHOBE FORM CONTACTING ANY COMPONENT IN EXCESS OF 250F. UNIST SHALL NOT PERMIT BLOCKING OF AIR FLOW AND SHALL PERMIT PLACEMENT OF FURNITURE AGAINST FRONT COVER WITHOUT CONTACTING HOOD. WALL MOUNTING PLATES SHALL BE SEPERATE 22 GAUGE STEEL SECTIONS SHALL HAVE 3/4" KNOCKOUTS WITH CONTINUOUS WIREWAY ALONG BSAE OF WALL MOUNTING PLATES, AND TERMINAL BLOCK WITH #10 BINDING HEAD TERMINAL SCREWS. PROVIDE END SECTIONS, CORNER CONNECTIONS, AND INTEGRAL THERMOSTATS. THERMOSTATS SHALL HAVE CURRENT-CARRYING CAPACITY TO CONTROL A MAXIMUM OF 5000 WATTS AT 240 VOLTS ACCURATE WITHIN PLUS OR MINUS ONE DEGREE. FINISH SHALL BE BAKED ENAMEL SUITABLE FOR OPERATION WITHOUT FURTHER FINISHING.

SIZES SHALL BE AS SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS.

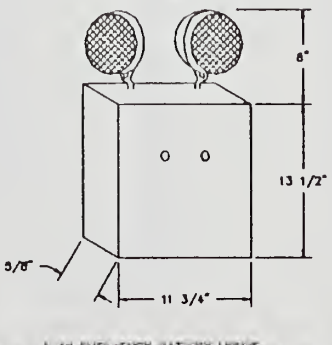
H-4
11-25-88

UNIT HEATER, ELECTRIC, SUSPENDED TYPE



HEATER SHALL BE HORIZONTAL TYPE WITH ELECTRIC HEATING COIL AND FAN FOR CEILING OR WALL MOUNTING. SIZE AS INDICATED ON THE PALN. HEATING COILS SHALL BE METAL SHEATHED FINNED TUBE ELECTRIC HEATING ELEMENTS. MOTOR SHALL BE TOTALLY-ENCLOSED, CONTINUOUS-DUTY, SLEEVE-BEARING TYPE EQUIPPED WITH BUILT-IN THERMAL OVERLOAD PROTECTION. UNIT SHALL HAVE COMBINATION FAN GUARD AHD MOTOR SUPPORT RESILIENT VIBRATION ELIMINATION MOUNTINGS. FAN SHALL BE DYNAMICALLY BALANCED AND DESIGNED SPECIFICALLY FOR UNIT HEATER APPLICATION. SURFACE OF CASING SHALL BE BONDERIZED AND FINISHED IN BAKED ENAMEL. PROVIDE AUTOMATIC LINE VOLTAGE RESET THERMO OVERHEAT CONTROL INTEGRALLY WIRED. PROVIDE THERMOSTAT AND ON-OFF SWITCH.

H-5
11-25-88



I-40 EMERGENCY BATTERY LIGHTS
(CORROSIVE ENVIRONMENTS AND WET LOCATIONS)

EMERGENCY LIGHTS SHALL BE TWIN SWIVEL SEAL BEAM 18 WATT LAMPS IN WATER-TIGHT, CORROSION-RESISTANT HEADS UNIT SHALL OPERATE 36 WATTS FOR 1 1/2 HOURS AT 87 1/2% OF NOMINAL VOLTAGE.

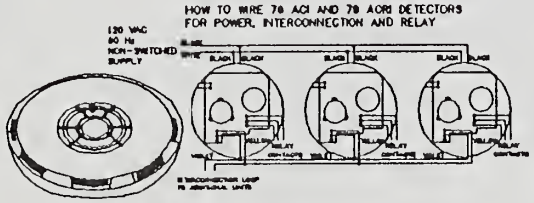
PROVIDE FIBERGLASS CASE, SOLID STATE TRANSFER OF BATTERY TO CHARGER, INVERSE-TEMPERATURE COMPENSATED DUAL-RATE CHARGER, LOW VOLTAGE BATTERY DISCONNECT, NON-GASSING PURE LEAD MAINTENANCE FREE BATTERIES, RED HIGH CHARGE AND A.C. "ON" LIGHT AND TEST SWITCH FOR TRANSFER AND D.C. LIGHTS.

FIXTURE SHALL MEET NEMA 4X NEC, OSHA CODES AND BE UL APPROVED. PROVIDE DYNARAY CAT #DR707F/105G-4X-2 AND BATTERY #S-18-155 OR APPROVED EQUAL.

LAMPS (2) 18W PAR 38 SEALED BEAM
BATTERY

I-40
11-25-88

HOW TO WIRE 70 ACI AND 70 AORI DETECTORS FOR POWER, INTERCONNECTION AND RELAY



FV-A 120 VAC LINE VOLTAGE POWERED
IONIZATION TYPE SMOKE DETECTOR

SMOKE DETECTOR SHALL BE DUAL CHAMBER IONIZATION TYPE, WITH REMOTE RELAY, TEST SWITCH AND SOLID STATE L.E.D. INDICATOR.

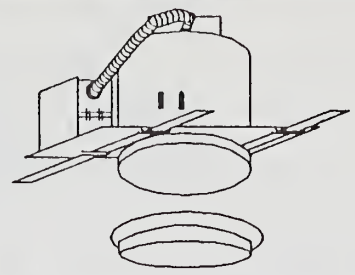
DETECTOR SHALL HAVE A 40 DEGREE TO 100 DEGREE F TEMPERATURE RANGE, 10% TO 90% RELATIVE HUMIDITY RANGE, AND SHALL FIT 4" SQUARE OR OCTANGONAL BOX.

MAXIMUM NUMBER OF DETECTORS INTERCONNECTABLE AT ONE TIME IS 12.

ALARM RELAY SHALL BE SPDT WITH DRY CONTACTS, RATED AT 2.0A AT 30 DC/1A AT 120VDC.

PROVIDE 6KR SMOKE DETE[illegible]779ACR1.
DETECTOR SHALL BE UL [illegible]
6
-88

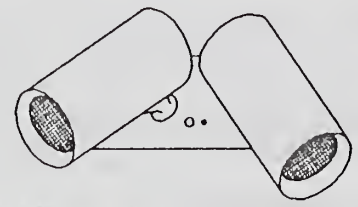
RECESSED CEILING FIXTURE



FIXTURE SHALL BE CONSTRUCTED OF MINIMUM 20 GAUGE STEEL, BAKED WHITE ENAMEL HOUSING. LAMP SOCKET SHALL BE TWIST-PROOF PORCELAIN. ATTACHED PRE-WIRED J-BOX SHALL BE EQUIPPED WITH 1/2" AND 3/4" KNOCK-OUTS. MOUNTING SHALL BE EITHER BY PLASTER BRACKETS AND/OR HANGER BARS. FRAME SHALL BE POLISHED CHROME AND FITTED WITH A DROP OPAL LENS. MINIMUM HOUSING DIMENSIONS SHALL BE 8" SQUARE, OR 7" DIAMETER ROUND AND 6" IN HEIGHT. FIXTURE SHALL BEAR THE UL LABEL.

LAMP 1 - 75W

I-6
11-25-88



EMERGENCY BATTERY LIGHTS

EMERGENCY LIGHT UNITS SHALL BE TWIN CYLINDER TYPE DESIGNED TO SURFACE MOUNT ON 3 1/4" OR 4" OUTLET BOX WITH THE FOLLOWING EQUIPMENT:

BATTERY _____12 VOLT SEALED NICKEL CADIUM TYPE SIZED FOR 2 HOUR OPERATION TO 87-1/2% OF NORMAL BATTERY VOLTAGE. SUPPLY POWER 120V, 60Hz. AC.

CHARGER_____ SOLID STATE WITH AUTOMATIC HIGH/LOW CHARGING.

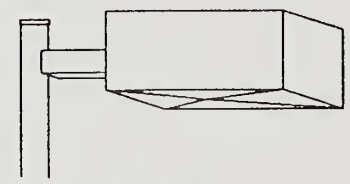
TRANSFER CIRCUIT - SOLID STATE AUTOMATIC WITH LOW BATTERY DISCONNECT AT 80% OF NORMAL BATTERY VOLTAGE.

PILOT LIGHTS - AC "on" LIGHT AND A RECHARGE LIGHT.

TEST SWITCH - TO CHECK TRANSFER OPERATION AND DC LAMPS.

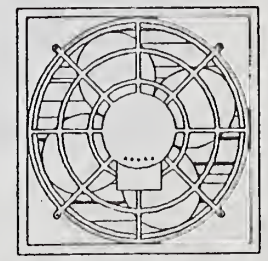
LAMPS 11-26-88 I-28 2-18 WATT SEALED BEAM

EXTERIOR AREA LIGHT



LUMINAIRE SHALL BE A RECTILINEAR HOUSING, SHARP CUTOFF FOR HIGH INTENSITY DISCHARGE LAMPS, TOTALLY ENCLOSED BRONZE ANODIZED EXTRUDED ALUMINUM HAVING AN INTEGRAL HAND AND COVER FOR FIELD WIRING CONNECTIONS. RAIN-TIGHT, DUST TIGHT AND CORROSION RESISTANT. FURNISHED WITH OPTICALLY CLEAR, HEAT AND IMPACT RESISTANT TEMPERED FLAT GLASS IN A HINGED EXTRUDED ALUMINUM FRAME, FURNISHED WITH STAINLESS STEEL LATCHES AND HINGE PINS. UNIT IS TO BE UL LISTED AS "SUITABLE FOR WET LOCATIONS."

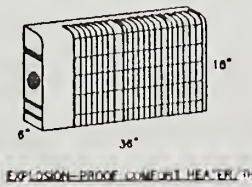
LAMP VOLTAGE 240 VOLTS 1000W HPS LU 1000/BU
BALLAST - REGULATOR 11-25-88 HPS-3



DIRECT DRIVE ATTIC EXHAUST FAN

WALL MOUNTED EXHAUST FAN SHALL HAVE BAKED ENAMEL FINISH. UNIT SHALL HAVE FULLY ENCLOSED LIFETIME LUBRICATED, BALL BEARING, SELF COOLING MOTOR, WITH BUILT-IN AUTOMATIC THERMAL OVERLOAD PROTECTION. EQUIPPED WITH THERMOSTAT SET TO AUTOMATICALLY TURN FAN ON AT 100° nd off ot 85°. INSTALL WITH AUTOMATIC WALL-TYPE SHUTTER. CFM, VOLTAGE AND PHASE AS SHOWN ON DRAWINGS.

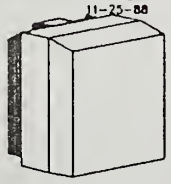
E-38
11-25-88



EXPLOSION-PROOF COMFORT HEATER/THERMOSTAT

CONVECTION TYPE, EXPLOSION-PROOF HEATER USED WITH EXPLOSION-PROOF THERMOSTAT. HEATING COILS SHALL BE METAL SHEATHED AND BRAZED TO FIN ELEMENTS. FINISH OF NEUTRAL GREY ENAMEL. HEATER AND THERMOSTAT RATED FOR HAZARDOUS INDUSTRIAL ATMOSPHERES. UNIT RATED AT 3KW. VOLTAGE 208V, 240V, OR 277V, SINGLE PHASE AS SHOWN ON DRAWINGS. HEATER AND COMPANION THERMOSTAT TO BE EXPLOSION PROOF, AND LISTED BY UNDERWRITERS' LABORATORIES FOR CLASS I, GROUP D; CLASS II, GROUPS E, F AND G (HAZARDOUS ATMOSPHERES). SNAP ACTION SPST THERMOSTAT.

H-10
11-25-88



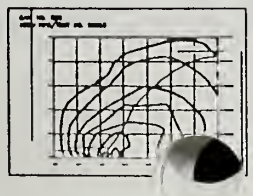
HPS - LUMINAIRE

THE LUMINAIRE SHALL CONSIST OF A REAR DIE-CAST BACK HOUSING WHICH ENCLOSES THE BALLAST, LAMP SOCKET, AND ALUMINUM REFLECTOR; AND A THERMAL SHOCK-RESISTANT PRISMATIC GLASS REFLECTOR. UNITS SHALL BE PREWIRED AND EQUIPPED TO BE WALL MOUNTED (OR POLE) DIRECTLY ON CONDUIT FOR SURFACE WIRING TO CONDUIT OR TO A RECESSED OUTLET BOX, AND SHALL REQUIRE NO TOOLS FOR LAMP REPLACEMENT. THE UNIT SHALL BE U.L. LISTED AS "SUITABLE FOR WET LOCATIONS". PROVIDE FIXTURE WITH PHOTOMETRIC OUTPUT EQUAL TO OR GREATER THAN THE DISTRIBUTION PATTERN SHOWN BELOW.

LAMP VOLTAGE AS SHOWN ON DRAWINGS 250W HPS LU250/BU
BALLAST - REGULATOR

HOLOPHANE

HPS-2



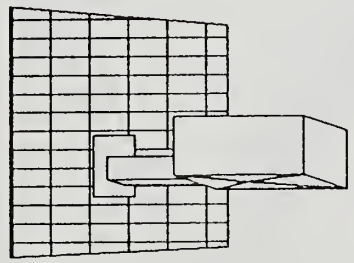
11-25-88

INTERIOR CEILING FIXTURE



FIXTURE SHALL BE DIE-CAST ALUMINUM CONSTRUCTION. SHALL FIT BOTH 3 1/4" AND 4" OUTLET BOXES, AND SHALL BE EQUIPPED WITH HEAT-PROOF NEOPRENE GASKET. THE GLOBE SHALL BE SCREW-IN OPALESCENT GLASS. MINIMUM DIAMETER SHALL BE 8", MIHIMUM OVERALL HEIGHT OF FIXTURE SHALL BE 7 1/2". FIXTURE SHALL BEAR THE UL LABEL.

LAMP 11-26-88 I-2 1 - 100W



EXTERIOR AREA LIGHT

LUMINAIRE SHALL BE A RECTILINEAR HOUSING WITH A 10° UPTILT, SHARP CUTOFF FOR HIGH INTENSITY DISCHARGE LAMPS, TOTALLY ENCLOSED BRONZE ANODIZED EXTRUDED ALUMINUM HAVING AN INTEGRAL HAND HOLE AND COVER FOR FIELD WIRING CONNECTIONS. RAIN-TIGHT, DUST TIGHT AND CORROSION RESISTANT. FURNISHED WITH OPTICALLY CLEAR, HEAT AND IMPACT RESISTANT TEMPERED FLAT GLASS LENS SEALED IN A HINGED EXTRUDED ALUMINUM FRAME. FURNISH WITH STAINLESS STEEL LATCHES AND HINGE PINS. UNIT IS TO BE UL LISTED AS "SUITABLE FOR WET LOCATIONS."

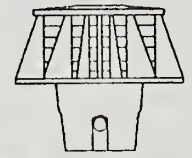
LAMP VOLTAGE 240 400W HIGH PRESSURE SODIUM
BALLAST - REGULATOR 11-25-88 NPS-4

EXTERIOR YARD LIGHT



FIXTURE SHALL BE DIE CAST ALUMINUM CONSTRUCTION WITH MOUNTING ADAPTER, ACRYLIC REFLECTOR PHOTO ELECTRIC CONTROL, POLARIZED QUICK DISCONNECT, GROUNDING PAD AND PREWIRED FOR CONNECTING DIRECTLY TO POWER. LAMP SHALL BE HIGH PRESSURE SODIUM. FIXTURE AND LAMP SHALL BEAR UL LABEL.

LAMP VOLTAGE 120 150 WATT S63WG-150/BU HIGH PRESSURE SODIUM
BALLAST HPS-1 11-25-88 REGULATOR



OUTDOOR GROUND LIGHTING FIXTURE

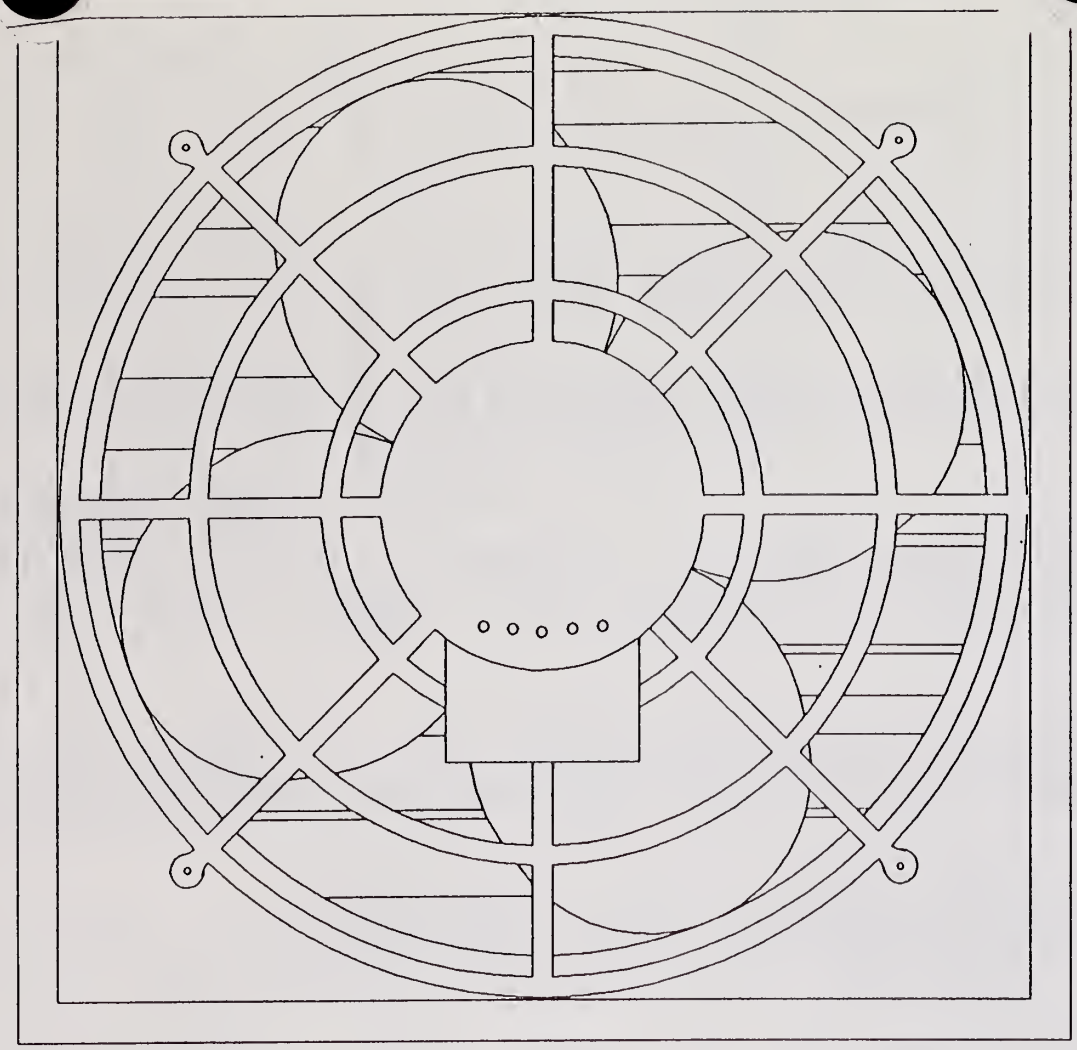
CAST ALUMINUM GROUND LIGHTING FIXTURE AND INTEGRAL JUNCTION BOX FOR MOUNTING IN CONCRETE WITH TWO 1/2" NPT OPENINGS IN BOTTOM. FURNISH WITH PORCELAIN MEDIUM SCREW BASE, CYLINDRICAL PYREX LENS 180° HORIZONTAL CUT-OFF LOUVERS, AND MOLDED NEOPRENE GASKET. PROVIDE DARK BRONZE ACRYLIC ENAMEL FINISH. UNIT APPROVED FOR OUTDOOR USE.

LAMP 120 VAC 11-25-88 I-32 1-75 WATT A-19

EFXCS006
12-2-88

ALL BLOCKS ARE INSERTED @ 1:1, "D" SIZE PLOTTED @ 1:1

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE THE PACIFIC NORTHWEST REGION	ELECTRICAL FIXTURE CUT SHEETS
DRAWN _____ DATE 10-2-88 DESIGNED _____ DATE CHECKED _____ DATE APPROVED _____ DATE	EFXC 6 SHT. 6 OF 10



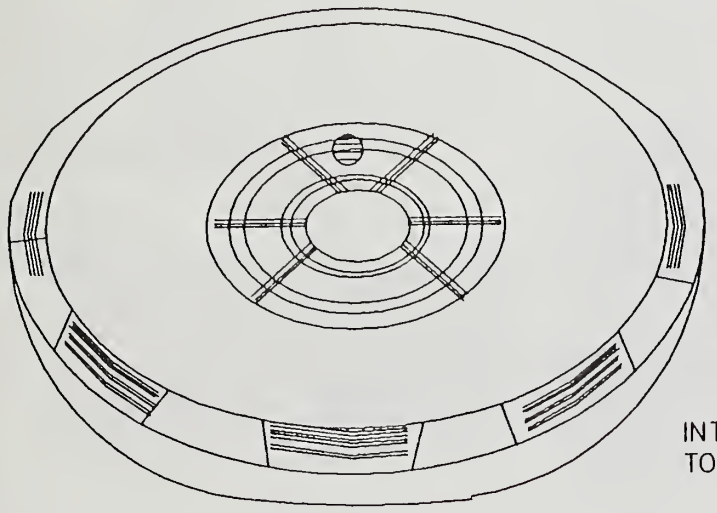
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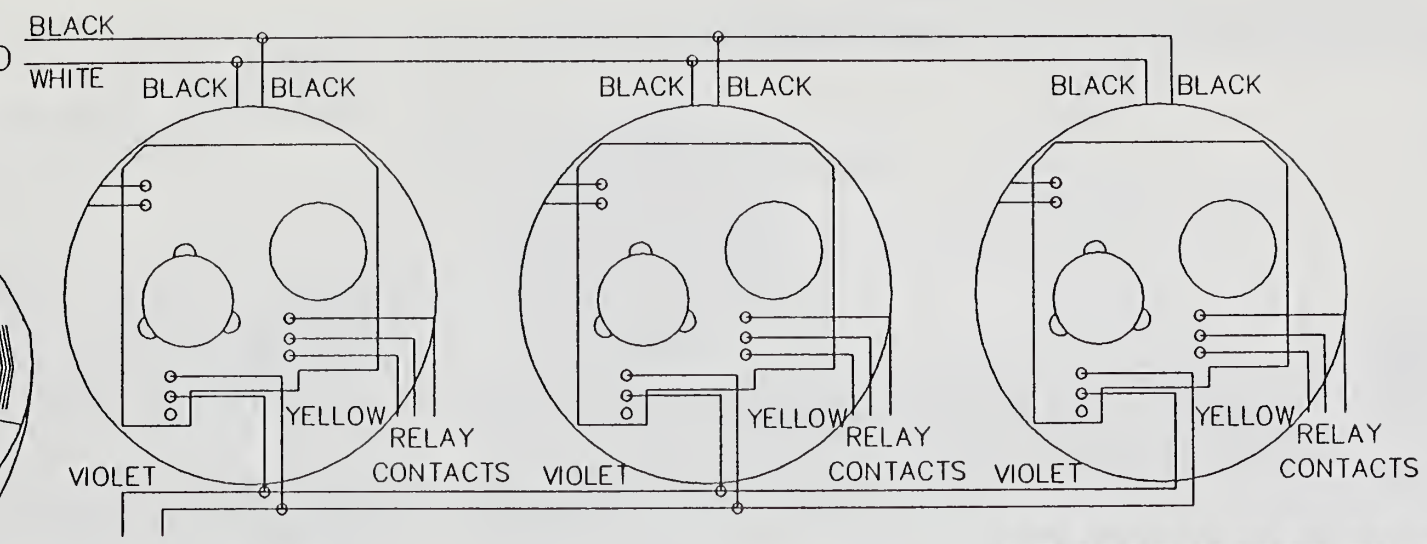
DIRECT DRIVE ATTIC EXHAUST FAN

WALL MOUNTED EXHAUST FAN SHALL.HAVE BAKED ENAMEL FINISH. UNIT SHALL HAVE FULLY ENCLOSED LIFETIME LUBRICATED, BALL BEARING, SELF COOLING MOTOR, WITH BUILT-IN AUTOMATIC THERMAL OVERLOAD PROTECTION. EQUIPPED WITH THERMOSTAT SET TO AUTOMATICALLY TURN FAN ON AT 100° nd off at 85°. INSTALL WITH AUTOMATIC WALL-TYPE SHUTTER. CFM, VOLTAGE AND PHASE AS SHOWN ON DRAWINGS.

HOW TO WIRE 79 ACI) 79 ACRI DETECTORS FOR POWER, INTERCONNECTION AND RELAY

120 VAC
60 Hz
NON-SWITCHED
SUPPLY





THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

FD-6 120 VAC LINE VOLTAGE POWERED IONIZATION TYPE SMOKE DETECTOR

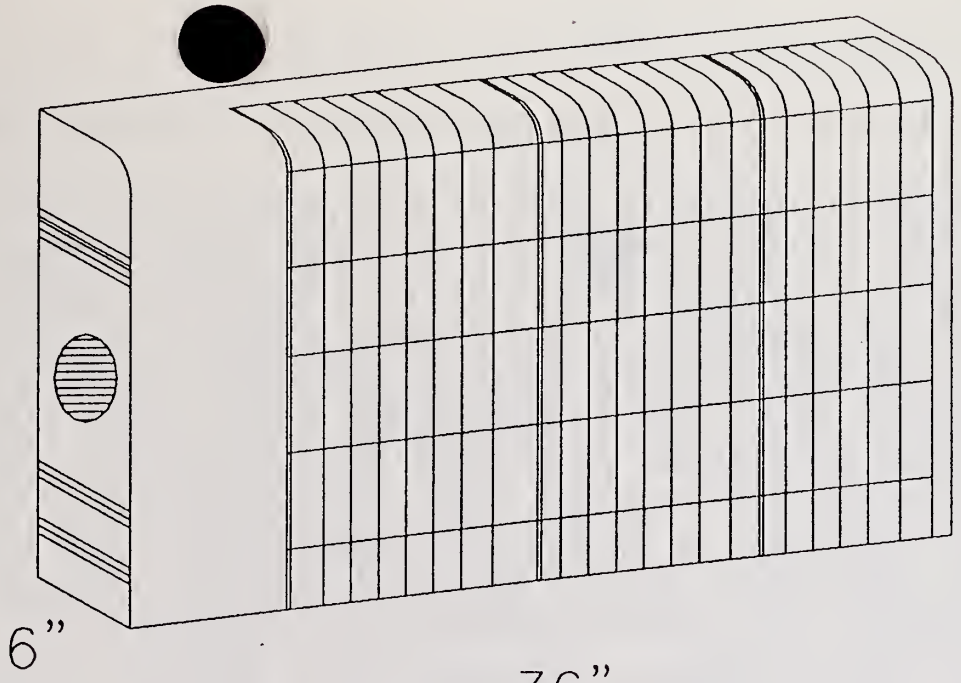
SMOKE DETECTOR SHALL BE DUAL CHAMBER IONIZATION TYPE, WITH REMOTE RELAY, TEST SWITCH AND SOLID STATE L.E.D. INDICATOR.

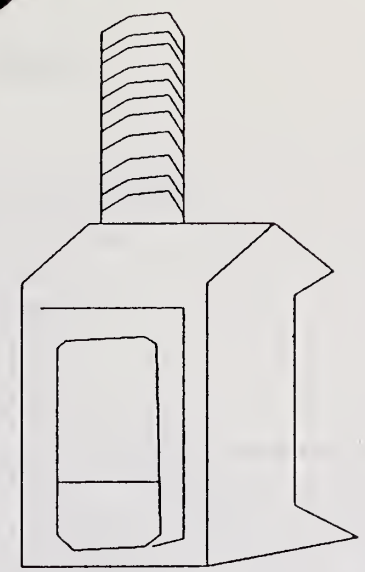
DETECTOR SHALL HAVE A 40 DEGREE TO 100 DEGREE F TEMPERATURE RANGE, 10% TO 90% RELATIVE HUMIDITY RANGE, AND SHALL FIT 4" SQUARE OR OCTANGONAL BOX.

MAXIMUM NUMBER OF DETECTORS INTERCONNECTABLE AT ONE TIME IS 12.

ALARM RELAY SHALL BE SPDT WITH DRY CONTACTS, RATED AT 2.0A AT 30 DC/1A AT 120VDC.

PROVIDE BKR SMOKE DETECTOR CAT #79ACR1.
DETECTOR SHALL BE UL LISTED.

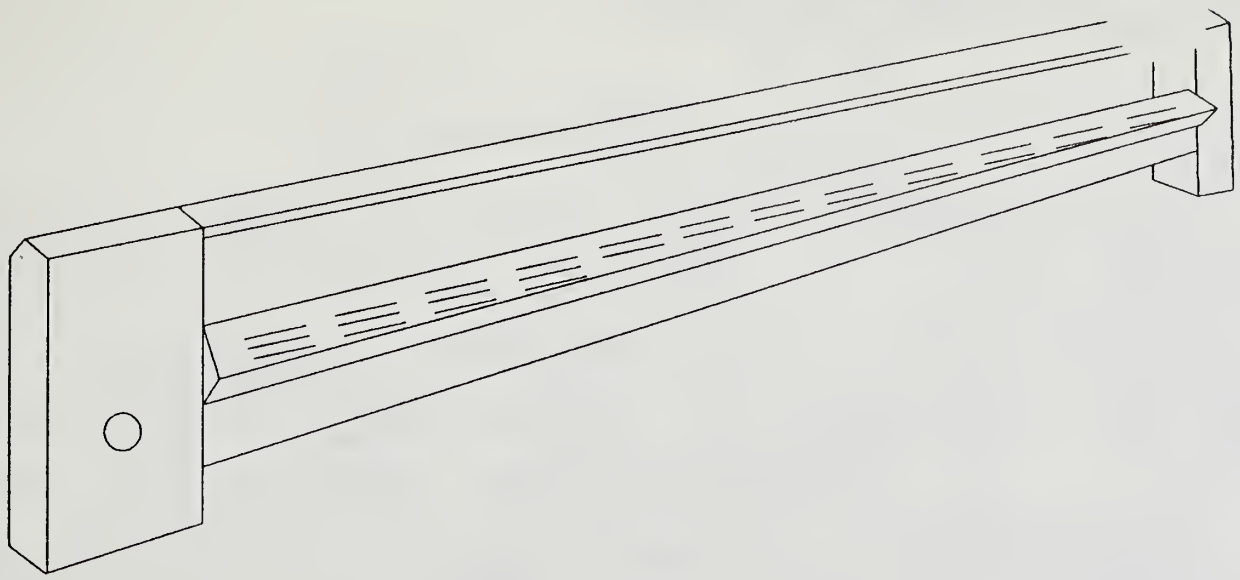




THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

EXPLOSION-PROOF COMFORT HEATER/THERMOSTAT

CONVECTION TYPE, EXPLOSION-PROOF HEATER USED WITH EXPLOSION-PROOF THERMOSTAT. HEATING COILS SHALL BE METAL SHEATHED AND BRAZED TO FIN ELEMENTS.
FINISH OF NEUTRAL GREY ENAMEL. HEATER AND THERMOSTAT RATED FOR HAZARDOUS INDUSTRIAL ATMOSPHERES.
UNIT RATED AT 3KW. VOLTAGE 208V, 240V, OR 277V, SINGLE PHASE AS SHOWN ON DRAWINGS.
HEATER AND COMPANION THERMOSTAT TO BE EXPLOSION PROOF, AND LISTED BY UNDERWRITERS' LABORATORIES FOR CLASS I, GROUP D: CLASS II, GROUPS E, F AND G (HAZARDOUS ATMOS-PHERES). SNAP ACTION SPST THERMOSTAT.



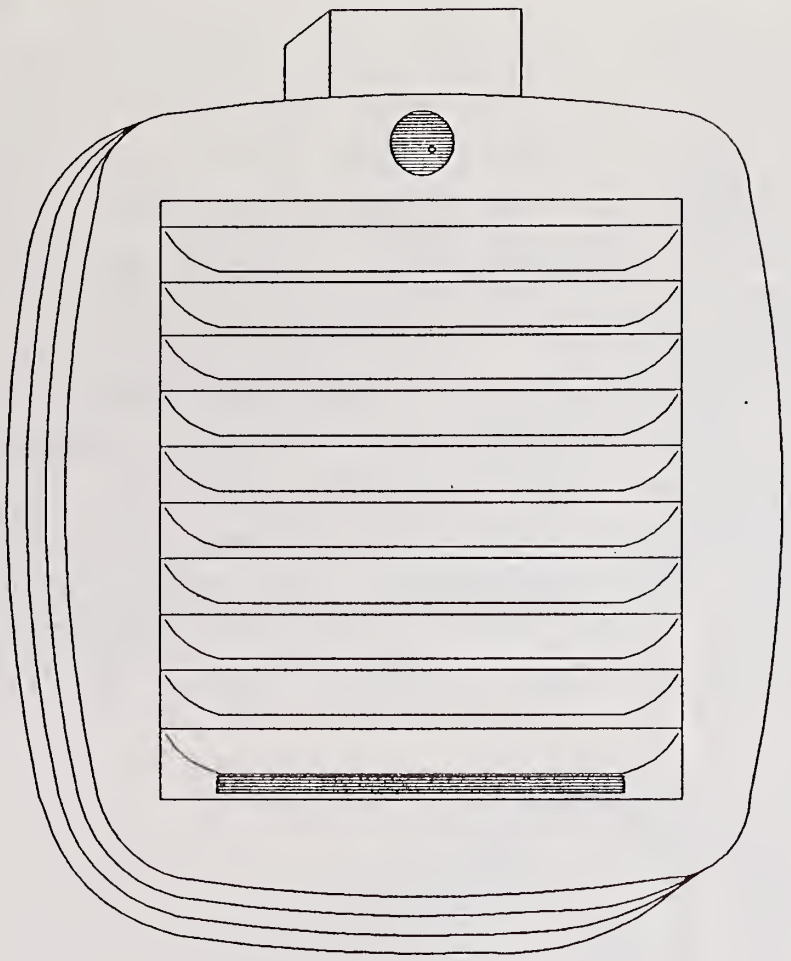
THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

ELECTRIC BASEBOARD HEATER

UNIT SHALL BE CONVECTION TYPE APPROVED FOR WALL MOUNTING AND PROVIDED WITH MEANS FOR SECURELY FASTENING ALL SECTIONS OF BASEBOARDS TOGETHER WITH ALL ACCESSORIES TO FORM A CONTINUOUS AND COMPLETE INSTALLATION. ALL UNITS AND DEVICES SHALL BE APPROVED AND LISTED BY UNDERWRITERS LABORATORIES. HEATING ELEMENTS SHALL BE CLOSED TYPE, METAL SHEATHED IN NON-CORROSIVE MATERIAL OF LOW-MASS TYPE DESIGNED FOR MINIMUM RISE OF 90° F. AT 100 FPM. RESISTANCE WIRE SHALL BE NIKEL-CHROME ALLOY. ELEMENTS SHALL HAVE A CAPACITY OF 250 WATTS MINIMUM PER LINEAL FOOT AT 240 VOLTS A.C., AND SHALL NOT VARY IN EXCESS OF PLUS OR MINUS 5 PERCENT. FRONT PANEL SHALL BE 20 GAUGE MINIMUM SUPPORTED AT 16-INCH MAXIMUM INTERVALS. HEATER BODY SHALL BE ONE PEICE 22 GAUGE MINIMUM. INTEGRAL BAFFLE SHALL PROVIDE A SCREEN GUARD OVER ELEMENT OR UNIT SHALL BE SO DESIGNED AS TO PREVENT A 1/4" X 3" PROBE FORM CONTACTING ANY COMPONENT IN EXCESS OF 250°F. UNIST SHALL NOT PERMIT BLOCKING OF AIR FLOW AND SHALL PERMIT PLACEMENT OF FURNITURE AGAINST FRONT COVER WITH-OUT CONTACTING HOOD. WALL MOUNTING PLATES SHALL BE SEPERATE 22 GAUGE STEEL. SECTIONS SHALL HAVE 3/4" KNOCKOUTS WITH CONTINUOUS WIREWAY ALONG BSAE OF WALL MOUNTING PLATES, AND TERMINAL BLOCK WITH #10 BINDING HEAD TERMINAL SCREWS. PROVIDE END SECTIONS, CORNER CONNEC-TIONS, AND INTEGRAL THERMOSTATS. THERMOSTATS SHALL HAVE CURRENT-CARRYING CAPACITY TO CONTROL A MAXIMUM OF 5000 WATTS AT 240 VOLTS ACCURATE WITHIN PLUS OR MINUS ONE DEGREE. FINISH SHALL BE BAKED ENAMEL SUITABLE FOR OPERATION WITHOUT FURTHER FINISHING.

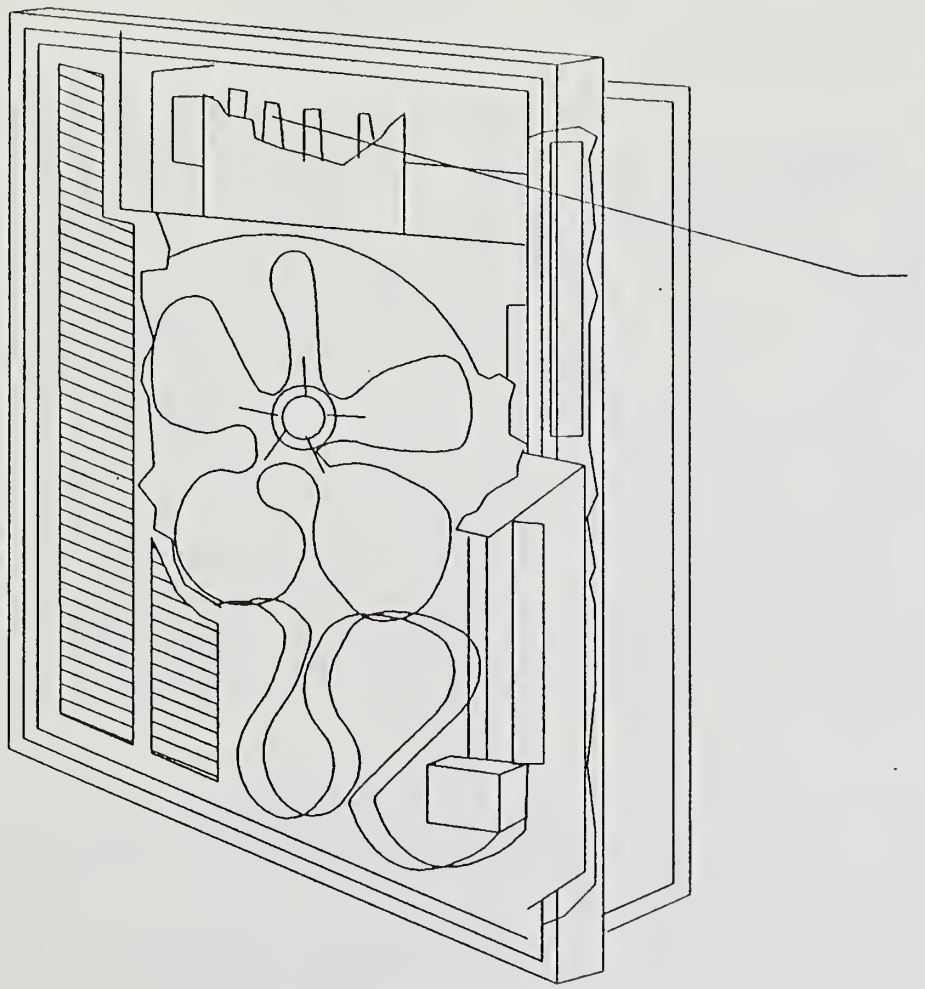
SIZES SHALL BE AS SHOWN ON THE PLANS OR IN THE SPECIAL PROVISIONS.

HEATER, ELECTRIC, SUSPENDED TYPE



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HEATER SHALL BE HORIZONTAL TYPE WITH ELECTRIC HEATING COIL AND FAN FOR CEILING OR WALL MOUNTING, SIZE AS IN-DICATED ON THE PALN. HEATING COILS SHALL BE METAL SHEA-THED FINNED TUBE ELECTRIC HEATING ELEMENTS. MOTOR SHALL BE TOTALLY-ENCLOSED, CONTINUOUS-DUTY, SLEEVE-BEARING TYPE EQUIPPED WITH BUILT-IN THERMAL OVERLOAD PROTECTION. UNIT SHALL HAVE COMBINATION FAN GUARD AND MOTOR SUPPORT RESILIENT VIBRATION ELIMINATION MOUNTINGS. FAN SHALL BE DYNAMICALLY BALANCED AND DESIGNED SPECIFICALLY FOR UNIT HEATER APPLICATION. SURFACE OF CASING SHALL BE BONDERIZED AND FINISHED IN BAKED ENAMEL. PROVIDE AUTOMATIC LINE VOLTAGE RESET THERMO OVERHEAT CONTROL INTEGRALLY WIRED. PROVIDE THERMOSTAT AND ON-OFF SWITCH.

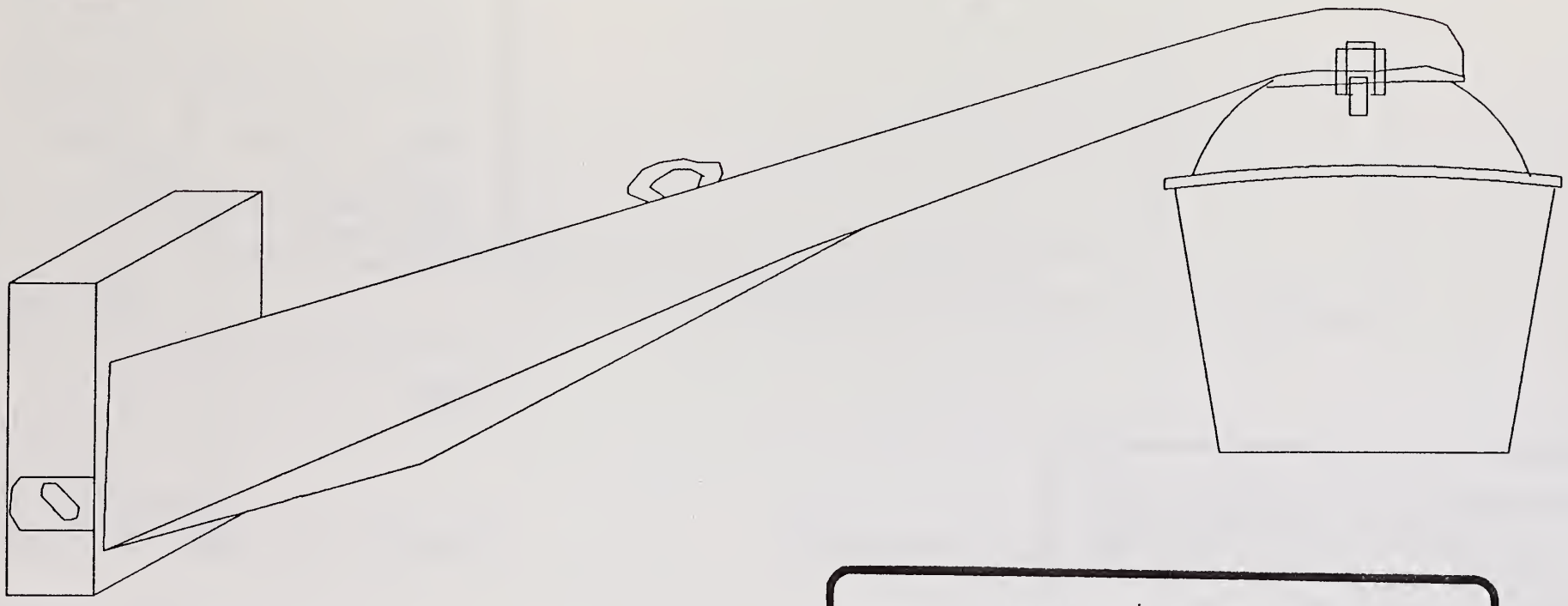


THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

HEATER SHALL BE A WALL INSERT TYPE HEATER, WITH WALL BOX FOR RECESSED MOUNTING IN "2 X 4" X 16" O.C. STUS SPACE. SURFACE MOUNT WALL BOX SHALL BE FURNISHED FOR MOUNTING ON FINISHED WALL WHERE SHOWN. UNIT SHALL HAVE METAL SHEATHED, FINNED TUBE HEATING ELEMENTS AND SHALL BE EQUIPPED WITH AUTOMATIC LINE VOLTAGE RESET THERMAL OVERHEAT SWITCH. FAN MOTOR SHALL BE TOTALLY ENCLOSED, PERMANENTLY LUBRICATED WITH INTEGRAL OVER–LOAD PROTECTION. FAN MOTOR CIRCUIT SHALL HAVE DELAY–ON–DE–ENERGIZATION SWITCH. FAN SHALL HAVE A MINIMUM OF 170 CFM OUTPUT. UNIT SHALL BE EQUIPPED WITH INTEGRAL, OR REMOTE (LOW VOLTAGE RELAY CONTROL), DAY–NIGHT TAMPER PROOF THERMOSTAT AND ON–OFF SWITCH AS SPECIFIED ON PLANS. TAMPER PROOF, 16 GAUGE RIBBED GRILLE SHALL BE DOWNFLOW–LOUVERED. UNIT SHALL BE OF KW SIZE AND VOLTAGE SPECIFIED ON PLANS. FINISH SHALL BE BAKED ENAMEL OR ANODIZED ALUMINUM. ALL CONTROLS SHALL BE INTERNALLY MOUNTED AND NOT ACCESSIBLE FROM FRONT COVER.

11-25-88

EXTERIOR YARD LIGHT



THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

FIXTURE SHALL BE DIE CAST ALUMINUM CONSTRUCTION WITH MOUNTING ADAPTER, ACRYLIC REFLECTOR PHOTO ELECTRIC CONTROL, POLARIZED QUICK DISCONNECT, GROUNDING PAD AND PREWIRED FOR CONNECTING DIRECTLY TO POWER. LAMP SHALL BE HIGH PRESSURE SODIUM. FIXTURE AND LAMP SHALL BEAR UL LABEL.

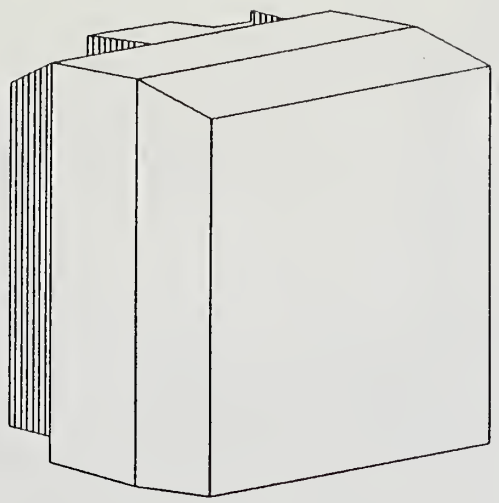
LAMP VOLTAGE 120 150 WATT S63MG-150/BU HIGH PRESSURE SODIUM

BALLAST

HPS-1

11-25-88

REGULATOR



HPS – LUMINAIRE

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

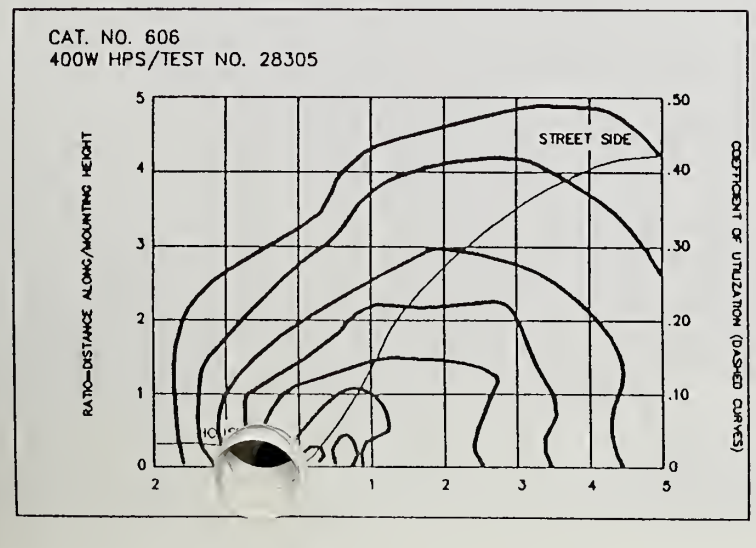
THE LUMINAIRE SHALL CONSIST OF A REAR DIE-CAST BACK HOUSING WHICH ENCLOSES THE BALLAST, LAMP SOCKET, AND ALUMINUM REFLECTOR; AND A THERMAL SHOCK-RESISTANT PRIMASTIC GLASS REFLECTOR. UNITS SHALL BE PREWIRED AND EQUIPPED TO BE WALL MOUNTED (OR POLE) DIRECTLY ON CONDUIT FOR SURFACE WIRING TO CONDUIT OR TO A RECESSED OUTLET BOX, AND SHALL REQUIRE NO TOOLS FOR LAMP REPLACEMENT. THE UNIT SHALL BE U.L. LISTED AS "SUITABLE FOR WET LOCATIONS". PROVIDE FIXTURE WITH PHOTOMETRIC OUTPUT EQUAL TO OR GREATER THAN THE DISTRIBUTION PATTERN SHOWN BELOW.

LAMP VOLTAGE AS SHOWN ON DRAWINGS
BALLAST – REGULATOR

250W HPS LU250/BU

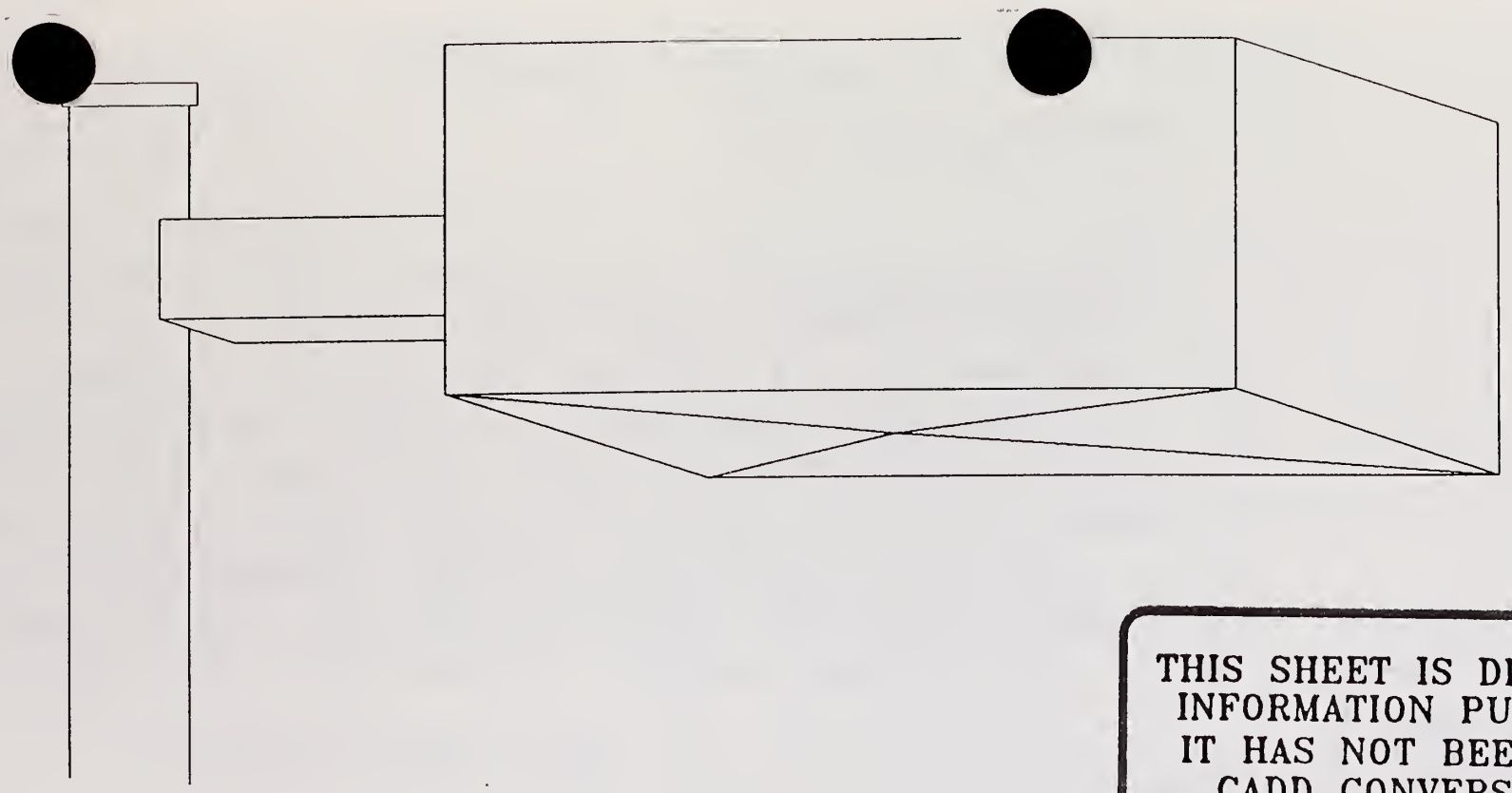
HOLOPHANE

HPS-2



11-25-88

11-25-88



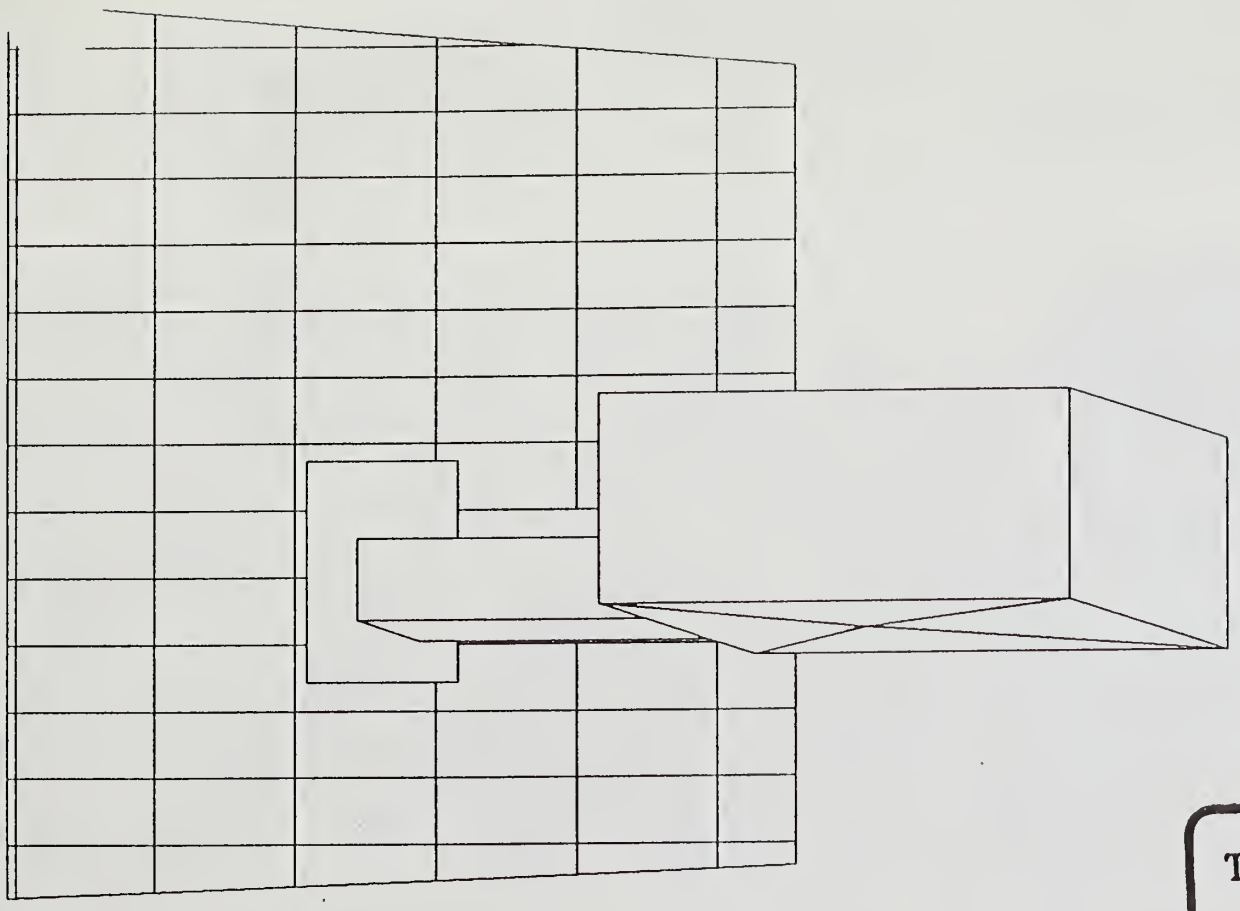
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EXTERIOR AREA LIGHT

LUMINAIRE SHALL BE A RECTINLINEAR HOUSING, SHARP CUTOFF FOR HIGH INTENSITY DISCHARGE LAMPS, TOTALLY ENCLOSED BRONZE ANODIZED EXTRUDED ALUMINUM HAVING AN INTEGRAL HAND AND COVER FOR FIELD WIRING CONNECTIONS. RAIN-TIGHT, DUST TIGHT AND CORROSION RESISTANT. FURNISHED WITH OPTICALLY CLEAR, HEAT AND IMPACT RESISTANT TEMPERED FLAT GLASS IN A HINGED EXTRUDED ALUMINUM FRAME, FURNISHED WITH STAINLESS STEEL LATCHES AND HINGE PINS. UNIT IS TO BE UL LISTED AS "SUITABLE FOR WET LOCATIONS."

LAMP VOLTAGE 240 VOLTS 1000W HPS LU 1000/BU

BALLAST - REGULATOR 11-25-88
HPS-3



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EXTERIOR AREA LIGHT

LUMINAIRE SHALL BE A RECTINLINEAR HOUSING WITH A 10° UPTILT, SHARP CUTOFF FOR HIGH INTENSITY DISCHARGE LAMPS, TOTALLY INCLOSED BRONZE ANODIZED EXTRUDED ALUMINUM HAVING AN INTEGRAL HAND HOLE AND COVER FOR FIELD WIRING CONNECTIONS. RAIN-TIGHT, DUST TIGHT AND CORROSION RESISTANT. FURNISHED WITH OPTICALLY CLEAR, HEAT AND IMPACT RESISTANT TEMPERED FLAT GLASS LENS SEALED IN A HINGED EXTRUDED ALUMINUM FRAME. FURNISH WITH STAINLESS STEEL LATCHES AND HINGE PINS. UNIT IS TO BE UL LISTED AS "SUITABLE FOR WET LOCATIONS."

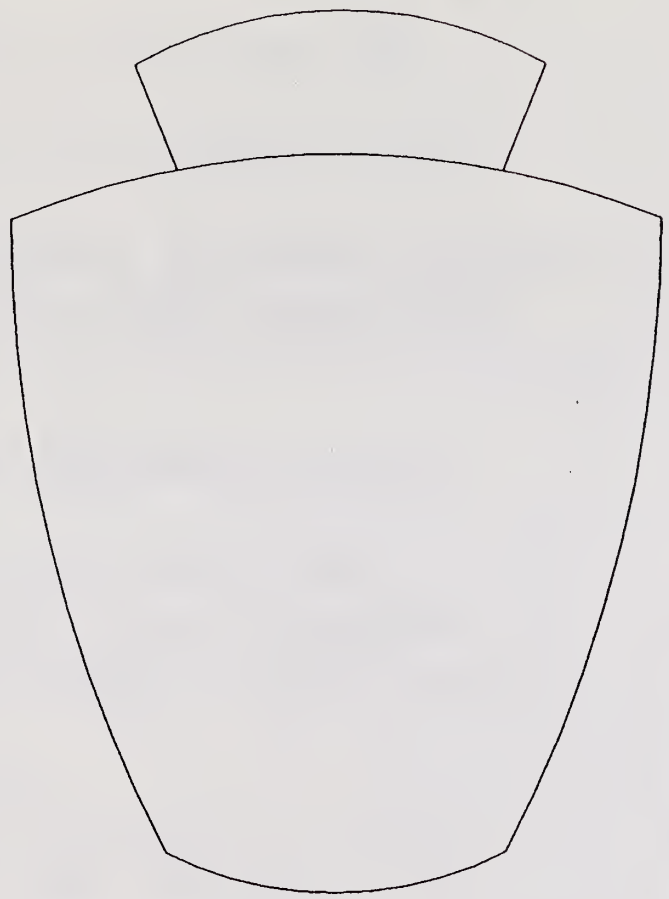
LAMP VOLTAGE 240
BALLAST - REGULATOR

11-25-88
HPS-4

400W HIGH PRESSURE SODIUM

BALLAST — REGULATOR 11-25-88 HPS-4 SODIUM

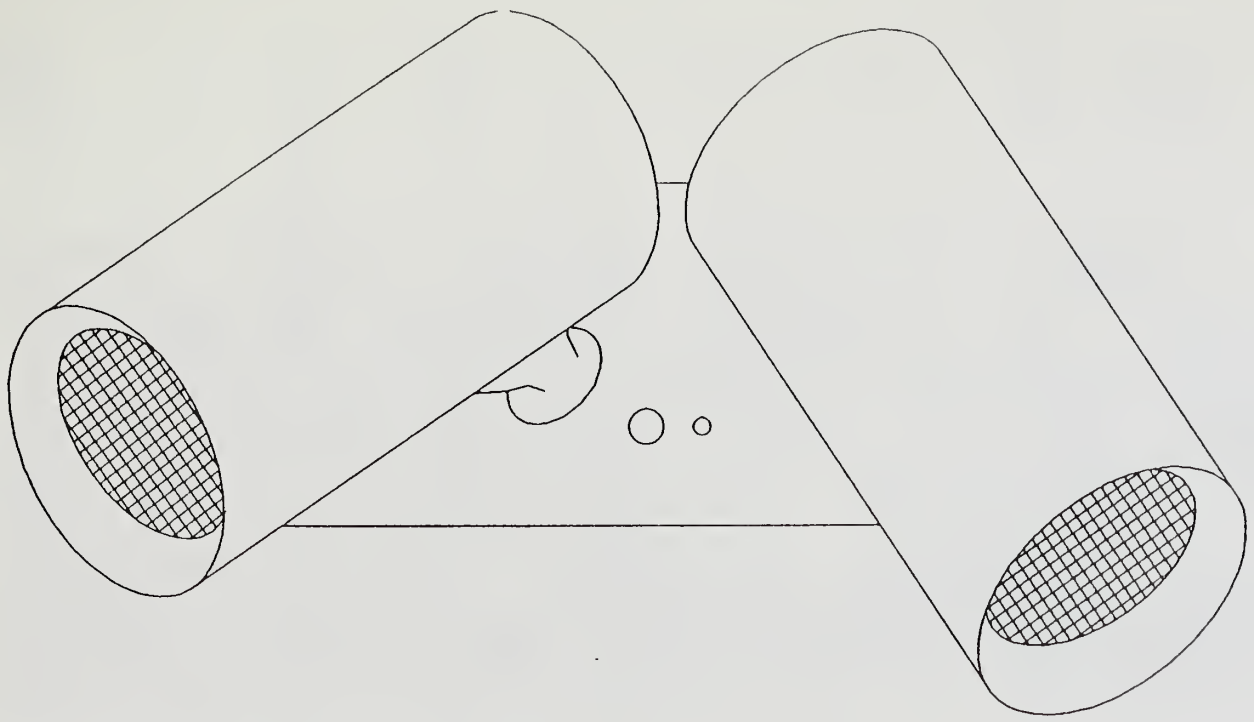
INTERIOR CEILING FIXTURE



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FIXTURE SHALL BE DIE-CAST ALUMINUM CONSTRUCTION. SHALL FIT BOTH 3 1/4" AND 4" OUTLET BOXES, AND SHALL BE EQUIPPED WITH HEAT-PROOF NEOPRENE GASKET. THE GLOBE SHALL BE SCREW-IN OPALESCENT GLASS. MINIMUM DIAMETER SHALL BE 6", MINIMUM OVERALL HEIGHT OF FIXTURE SHALL BE 7 1/2". FIXTURE SHALL BEAR THE UL LABEL.

LAMP 1 - 100W



EMERGENCY BATTERY LIGHTS

EMERGENCY LIGHT UNITS SHALL BE TWIN CYLINDER TYPE DESIGNED TO SURFACE MOUNT ON 3 1/4" OR 4" OUTLET BOX WITH THE FOLLOWING EQUIPMENT:

BATTERY _____12 VOLT SEALED NICKEL CADIUM TYPE SIZED FOR 2 HOUR OPERATION TO 87-1/2% OF NORMAL BATTERY VOLTAGE. SUPPLY POWER 120V, 60Hz. ,AC.

CHARGER_____ SOLID STATE WITH AUTOMATIC HIGH/ LOW CHARGING.

TRANSFER CIRCUIT - SOLID STATE AUTOMATIC WITH LOW BATTERY DISCONNECT AT 80% OF NORMAL BATTERY VOLTAGE.

PILOT LIGHTS - AC "on" LIGHT AND A RECHARGE LIGHT.

TEST SWITCH - TO CHECK TRANSFER OPERATION AND DC LAMPS.

11-26-88

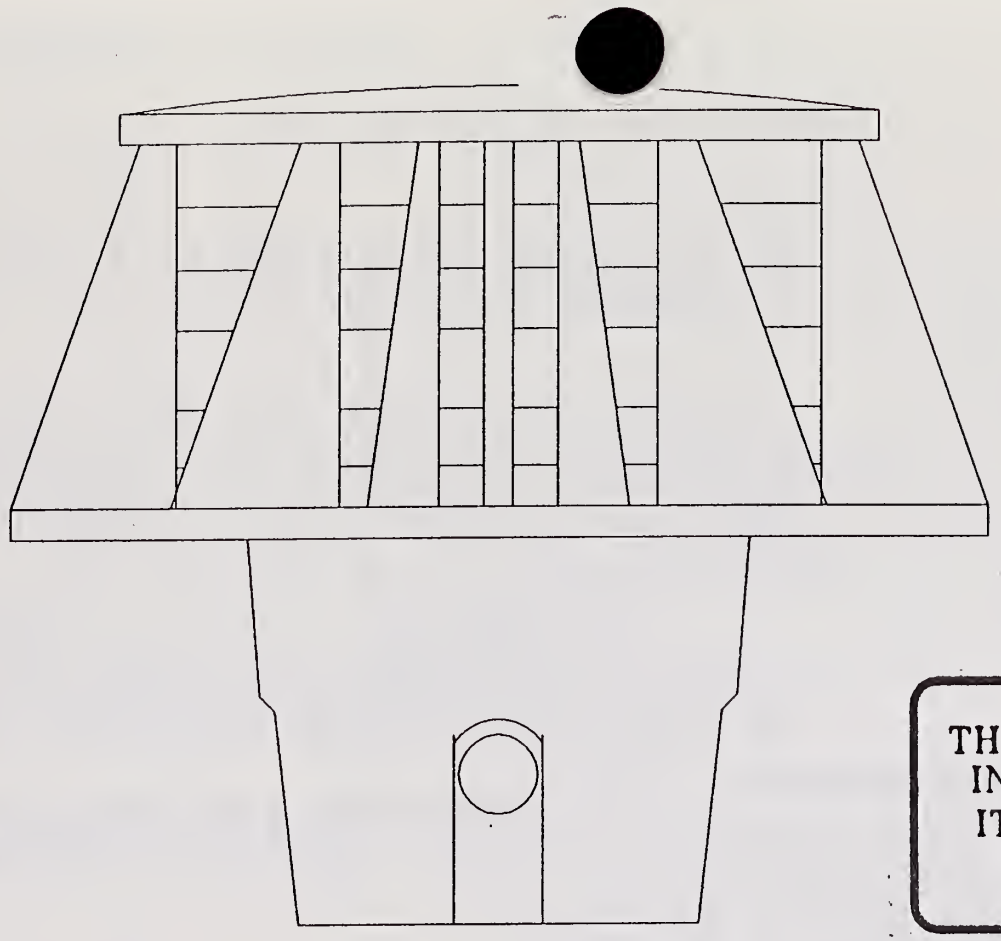
LAMPS - 1-28 2-18 WATT SEALL BEAM

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LAMPS

11-26-88
1-28

2-18 WATT SEALED BEAM



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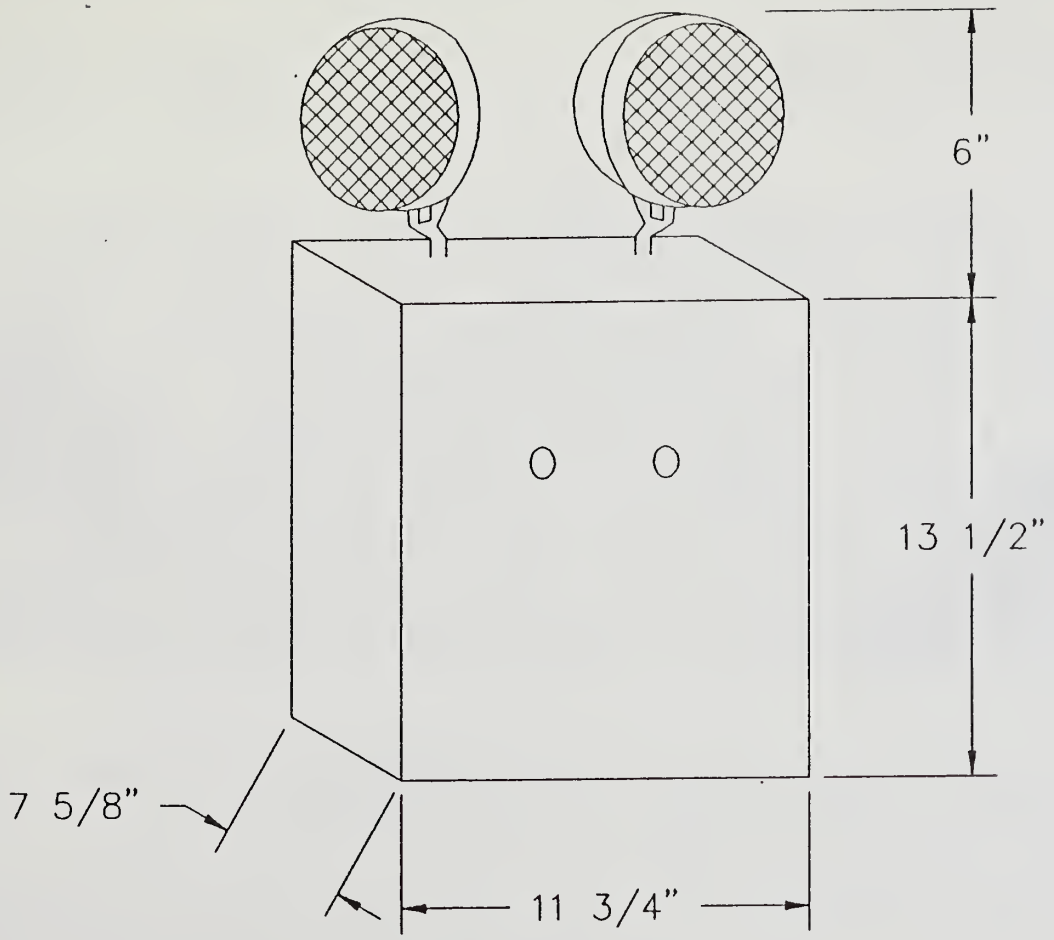
OUTDOOR GROUNG LIGHTING FIXTURE

CAST ALUMINUM GROUNG LIGHTING FIXTURE AND INTEGRAL JUNCTION BOX FOR MOUNTING IN CONCRETE WITH TWO 1/2" NPT OPENINGS IN BOTTOM. FURNISH WITH PORCELAIN MEDIUM SCREW BASE, CYLINDRICAL PYREX LENS 180° HORIZONTAL CUT-OFF LOUVERS, AND MOLDED NEOPRENE GASKET. PROVIDE DARK BRONZE ACRYLIC ENAMEL FINISH. UNIT APPROVED FOR OUTDOOR USE.

LAMP 120 VAC

11-25-88
1-32

1-75 WATT A-19



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I-40 EMERGENCY BATTERY LIGHTS (CORROSIVE ENVIRONMENTS AND WET LOCATIONS)

EMERGENCY LIGHTS SHALL BE TWIN SWIVEL SEAL BEAM 18 WATT LAMPS IN WATER-TIGHT, CORROSION-RESISTANT HEADS. UNIT SHALL OPERATE 36 WATTS FOR 1 1/2 HOURS AT 87 1/2% OF NOMINAL VOLTAGE.

PROVIDE FIBERGLASS CASE, SOLID STATE TRANSFER OF BATTERY TO CHARGER, INVERSE-TEMPERATURE COMPENSATED DUAL-RATE CHARGER, LOW VOLTAGE BATTERY DISCONNECT, NON-GASSING PURE LEAD MAINTENANCE FREE BATTERIES, RED HIGH CHARGE AND A.C. "ON" LIGHT AND TEST SWITCH FOR TRANSFER AND D.C. LIGHTS.

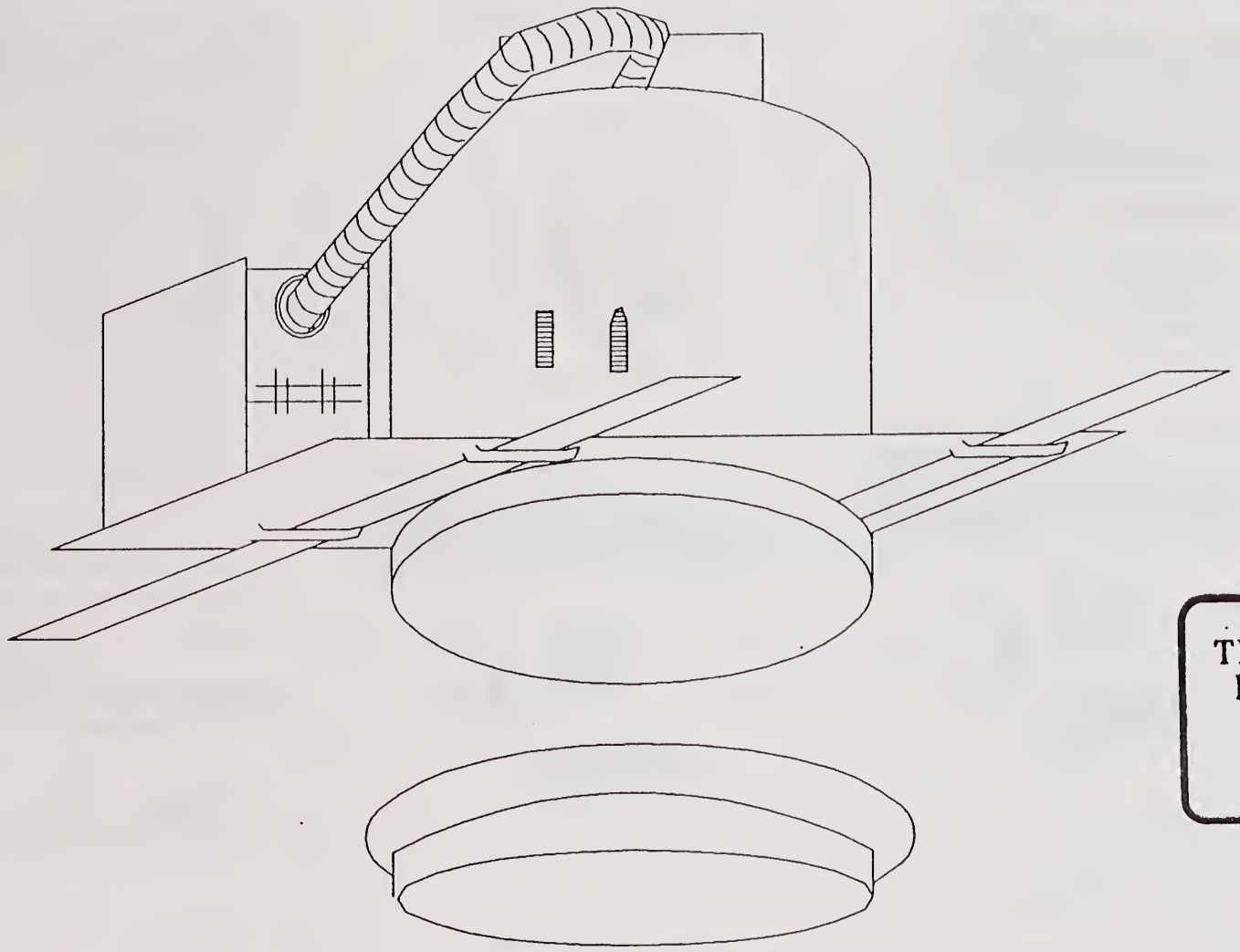
FIXTURE SHALL MEET NEMA 4X NEC, OSHA CODES AND BE UL APPROVED. PROVIDE DYNARAY CAT #DR707F/10SG-4X-2 AND BATTERY #S-18-155 OR APPROVED EQUAL.

LAMPS (2) 18W PAR 36 SEALED BEAM
BATTERY

BATTERY

I-40
11-25-88

RECESSED CEILING FIXTURE



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FIXTURE SHALL BE CONSTRUCTED OF MINIMUM 20 GAUGE STEEL, BAKED WHITE ENAMEL HOUSING. LAMP SOCKET SHALL BE TWIST-PROOF PORCELAIN. ATTACHED PRE-WIRED J-BOX SHALL BE EQUIPPED WITH 1/2" AND 3/4" KNOCK-OUTS. MOUNTING SHALL BE EITHER BY PLASTER BRACKETS AND/OR HANGER BARS. FRAME SHALL BE POLISHED CHROME AND FITTED WITH A DROP OPAL LENS. MINIMUM HOUSING DIMENSIONS SHALL BE 8" SQUARE. OR 7" DIAMETER ROUND AND 6" IN HEIGHT. FIXTURE SHALL BEAR THE UL LABEL.

LAMP 1 - 75W

I-6
11-25-88

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INTERIOR CEILING FIXTURE



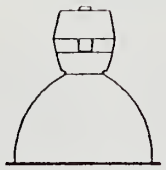
FIXTURE SHALL CONSIST OF A ONE PIECE 18 GAUGE ALUMINUM CEILING PAN, OR MAY BE DIE-CAST ALUMINUM. LATCHING DEVICES SHALL PREVENT GLASS SHADE FROM DROPPING. GLASS SHALL BE HAND BLOWN OPALESCENT. FIXTURE SHALL BE SUITABLE FOR 3 1/4" OR 4" OUTLET BOXES. SATIN CHROME FINISH. FIXTURE SHALL BEAR UL LABEL

	MIN DIAM	MIN OVERALL HT
I-3	8"	4"
I-4	10"	4 1/2"
I-5	14"	5 1/2"

LAMPS

I-3	1 - 60W
I-4	2 - 60W
I-5	4 - 60W OR 2 100W

11-20-88



AILES - STACK METAL HALIDE LUMINAIRE

METAL HALIDE FIXTURE WITH INTEGRAL HIGH POWER FACTOR BALLAST WITH OPTICAL CONTROL PRISMATIC GLASS REFLECTOR BELOW FIXTURE TO DIRECT LIGHT INTO AILE STACKS TO MINIMIZE GLARE. DISTRIBUTION PATTERN TO BE RECTANGULAR. FIXTURE TO BE DESIGNED FOR WIDE AISLE LIGHTING. VOLTAGE AS SHOWN ON DRAWINGS. FURNISH WITH VERTICAL FOOT CANDLES, 15 FEET BELOW FIXTURE, 10 FEET TO SIDE OF FIXTURE WITH FIXTURE CENTERED IN A 10 FOOT AISLE, ON STACK TO 2.5 FOOT CANDLES MINIMUM.

FURNISH WITH 250W TUNGSTEN HALOGEN EMERGENCY TRANSFER SYSTEM TO TRANSFER LIGHT SOURCE FROM MAIN LAMP TO AUXILIARY LAMP DURING MOMENTARY POWER OUTAGES LAMP TO RETRANSFER WHEN METAL HALIDE LAMP IS REIGNITED. FURNISH WITH RIGID CONDUIT SWIVEL HANGERS

LAMP	1 PHOSPHOR COATED METAL HALIDE BT-37 400W LAMP
BALLAST	PEAK LEAD AUTO TRANSFORMER

MH-2
11-20-88



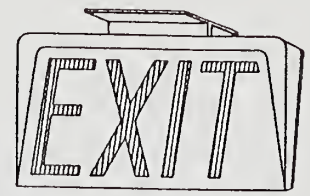
METAL HALIDE LUMINAIRE

METAL HALIDE FIXTURE SHALL HAVE BALLAST CLASS "H" INSULATED, -20°F STARTING, 60 HZ REGULATED HIGH POWER FACTOR TYPE. UNIT SHALL BE U.L. 57 LISTED AS "SUITABLE FOR WET LOCATIONS" AND 55° AMBIENT OPERATION. ENCLOSED AND GASKETED UNIT SHALL BE FURNISHED WITH A THERMAL SHAOCK-AND IMPACT-RESISTANT GLASS REFRACTOR, PRODUCING A TYPE ASSEMETRICAL DISTRIBUTION. REFRACTOR TO BE FURNISHED WITH WIRE GUARD.

FURNISH WITH 150 WATT, QUARTZ LAMP STANDBY SYSTEM - ON WHEN POWER IS RESTORED: OFF WHEN H.I.D. LAMP RESTRIKES. FURNISH WITH RIGID CONDUIT STEM HANGERS.

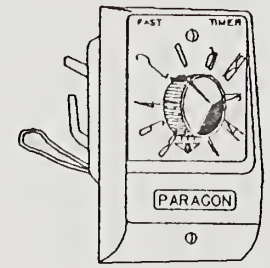
LAMP		I-175 WATT CLEAR METAL HALIDE
BALLAST	11-13-88 MH-4	BT-26 PEAK LEAD AUTO TRANSFORMER

EXIT LIGHT



FIXTURE SHALL HAVE STAINLESS STEEL FRAME AND SIGN BACKGROUND WITH SATIN FINISH. PLASTIC FACE WITH GREEN SIX-(6) INCH LETTERS. SINGLE FACE. WIRED WITH SIX (6) MINIATURE LAMPS. DIMENSIONS SHALL BE APPROXIMATELY 7 1/2" INCHES HIGH BY 11 5/8" WIDE BY 2 INCHES THICK. BRACKET HANGER DEVICE SHALL BE SUITABLE FOR TOP, END OR BACK MOUNTING.

LAMPS	11-13-88 I-21	SIX (6) 1-WATT MINIATURE PANEL BOARD INDICATOR LAMPS



FLUSH MOUNTED INTERVAL TIMER

THE TIMER SHALL BE 120V WITH 1800 WATT CAPACITY AND HAVE A DIAL RANGE FROM 0-30 MINUTES. TIMER SHALL BE UL APPROVED. DIAL GRADUATIONS 1/2 MINUTES.

TS-2
11-13-88



ALARM HORN/SIREN

PROVIDE TAMPERPROOF HORN/SIREN WITH WEATHERPROOF BACK BOX, CAPABLE OF SWIVELING THROUGH 180° HORIZONTALLY AND 90° VERTICALLY.

NOMINAL OUTPUT AT 10 FEET:

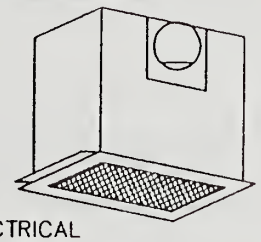
HORN - 114 dB
SIREN - 112 dB

SIREN TONE TO RISE AND FALL FROM 300 - 3000 Hz. EVERY SECONDS.

POWER CONSUMPTION APPROXIMATELY 8.4 TO 12.5 VA D.C., 15.8 TO 33.8 VA A.C.
VOLTAGE: 12 120 A.C. OR D.C.

E-44
11-20-88

CEILING EXHAUST FAN



ELECTRICAL

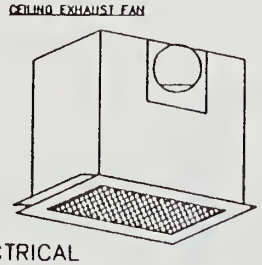


THE CEILING FAN HOUSING TO BE CONSTRUCTED OF PHOSPHATIZED STEEL WITH AN OVEN BAKED ENAMEL FINISH. GOUSING INTERIOR ACOUSTICALLY LINED WITH 1/2 INCH THICK INSULATION. DISCHARGE OUTLET ADAPTABLE TO HORIZONTAL OR VERTICAL POSITIONS. TERMINAL BOX INTERNALLY MOUNTED FOR MOTOR HOOK-UP. MOTOR MOUNTED ON RESILIENT ELASTIC GROMMETS. FAN TO HAVE A FOWARD CURVED CENTRIFUGAL WHEEL. FAN TO BEAR THE AMCA SEAL FOR AIR AND SOUND PERFORMANCE. FAN TO BE UL LISTED.

NORSEPOWER, CFM, VOLTAGE, AND PHASE AS SHOWN ON DRAWINGS.

E-45A
11-20-88

CEILING EXHAUST FAN



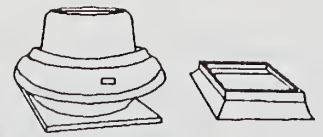
ELECTRICAL



THE CEILING FAN HOUSING TO BE CONSTRUCTED OF PHOSPHATIZED STEEL WITH AN OVEN BAKED ENAMEL FINISH. GOUSING INTERIOR ACOUSTICALLY LINED WITH 1/2 INCH THICK INSULATION. DISCHARGE OUTLET ADAPTABLE TO HORIZONTAL OR VERTICAL POSITIONS. TERMINAL BOX INTERNALLY MOUNTED FOR MOTOR HOOK-UP. MOTOR MOUNTED ON RESILIENT ELASTIC GROMMETS. FAN TO HAVE A FOWARD CURVED CENTRIFUGAL WHEEL. FAN TO BEAR THE AMCA SEAL FOR AIR AND SOUND PERFORMANCE. FAN TO BE UL LISTED.

NORSEPOWER, CFM, VOLTAGE, AND PHASE AS SHOWN ON DRAWINGS.

E-46
11-20-88



DIRECT DRIVE ROOF EXHAUST FAN

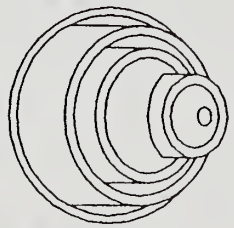
ROOF MOUNTED EXHAUST FAN SHALL HAVE SPUN ALUMINUM CORRISION RESISTANT HOUSING AND CURB CAP WITH STAINLESS STEEL FASTENINGS. UNIT SHALL BE EQUIPPED WITH BIRD GUARD, AUTOMATIC BACKDRAFT DAMPER, AND VIBRATION ISOLATORS.

EXHAUST FAN SHALL HAVE BALANCED FAN AND HUB FOR QUIET OPERATION, INTERNAL ALUMINUM POST FOR CONDUIT AND BE UL APPROVED FOR EXTERIOR MOUNTIND. MOTOR SHALL HAVE PRELUBRICATED BEARINGS AND INTEGRAL THERMAL PROTECTION WITH AUTOMATIC RESET. MOTOR SHALL BE SINGLE OR MULTI-SPEED AS REQUIRED. IF A MULTI-SPEED MOTOR IS REQUIRED PROVIDE A SPEED SELECTOR SWITCH SUITABLE FOR THE AREA IN WHICH IT IS TO BE MOUNTED.

PROVIDE A PREMANUFACTURED OR CUSTOM BUILT CURB AND FLASHIND SUITABLE FOR MOUNTIND THE ROOF MOUNTED EXHAUST FAN. COORDINATE THE SIZE, LOCATION AND MOUNTING OF THE CURB WITH THE STRUCTURE TO INSURE A WEATHERPROOF INSTALLATION.

CFM, VOLTAGE AND PHASE AS SHOWN ON THE DRAWINGS.

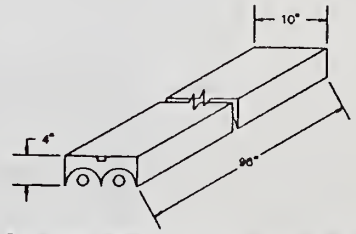
E-56
11-20-88



DIRECT DRIVE WALL EXHAUST FAN

WALL MOUNTED EXHAUST FAN SHALL HAVE SPUN ALUMINUM CORROSION RESISTANT HOUSING WITH STAINLESS STEEL FASTENINGS. UNIT SHALL BE EQUIPPED WITH AUTOMATIC BACKDRAFT DAMPER, STEEL U-SPRING SUSPENSION FOR VIBRATION ISOLATION, AND STANDARD ROUND DUCT FITTINGS FOR DUCTED INSTALLATIONS. EXHAUST FAN SHALL HAVE BALANCED FAN AND HUB FOR QUIET OPERATION, PRELUBRICATED BALL BEARING TYPE DRIVE, INTERNAL ALUMINUM WIRING POST FOR CONDUIT, AND BE U.L. APPROVED FOR EXTERIOR WALL MOUNTING. MOTOR TO BE EXPLOSION PROOF. PROVIDE PVC COATED BIRD AND BUD SCREEN AND FIXED-OPEN ALUMINUM LOUVER. DISCHARGES AIR OUT AND AWAY FROM BUILDING. NP, CFM, VOLTAGE AND PHASE AS SHOWN ON DRAWINGS.

E-47
11-20-88



FLOURESCENT FIXTURE WITH TWO PARABOLIC SHAPED, SPECULAR ANODIZED ALUMINUM REFLECTORS TO CONCENTRATE LIGHT IN A 30° ZONE FROM VERTICAL. LIGHT OUTPUT A MINIMUM OF 65% OF AVAILIBLE LAMP OUTPUT ON GROWING SURFACE. PROVIDE CHAIN HANGERS AND CORD CONNECTIONS. PROVIDE JD 21 LIGHTING SYSTEMS FIXTURE NO. SG-297SHO OR APPROVED EQUAL.

LAMPS		2-F96T12WW
BALLAST	11-12-88 F-30	RAPID START 1500MA
VOLTAGE		120 VAC, 60 HZ

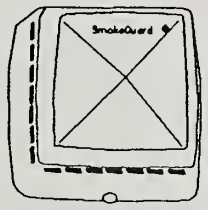
EXTERIOR WALL BRACKET



FIXTURE SHALL BE DIE-CAST ALUMINUM CONSTRUCTION. SHALL FIT BOTH 3 1/4" AND 4" OUTLET BOXES AND SHALL BE EQUIPPED WITH HEAQTPROOF NEOPRENE GASKET. THE GLOBE SHALL BE SCREW-IN OPALESCENT GLASS. FIXTURE SHALL BEAR THE UL LABEL.

11-20-88
I-1

LAMP
I-100W

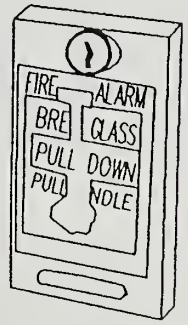


BATTERY POWERED IONIZATION TYPE SMOKE DETECTOR

SMOKE DETECTOR SHALL BE BATTERY POWERED IONIZATION TYPE, CEILING MOUNT, WITH SOLID STATE ALARM CIRCUITRY.

UNIT SHALL HAVE BATTERY FAILURE INDICATION, ADJUSTABLE SENSITIVITY CONTROL AND 85 DECIBAL ALARM HORN. DETECTOR SHALL HAVE AT LEAST 40° TO 100°F TEMPERATURE RANGE AND 0 TO 95%R.H. HUMIDITY RANGE AND FIT 3" OCTAGNAL OUTLET BOX. SUPPLY WITH 3 - 4.5 VOLT ALKALINE BATTERIES, U.L. LISTED.

FD-2
11-20-88



FIRE ALARM STATION

THE FIRE ALARM STATION SHALL HAVE HINGED HAMMER TO BREAK GLASS, PULL LEVER TO SOUND ALARM, KEY LOCK FOR TEST AND RESET AND CAN BE SURFACE OR SEMI-FLUSH MOUNTED.

FINISH SHALL BE HIGH IMPACT RED LEXAN - HIGH GLOSS PAINT.

ALARM STATION SHALL BE UL LISTED.
FD-3
11-20-88



ROADWAY & AREA LUMINAIRE
150W OR 250W

THE LUMINAIRE SIDEWALLS SHALL BE MITER-BEND CONSTRUCTION FROM A SINGLE PEICE OF ALUMINUM. CANOPY SHALL BE CRIMPED AND SEALED TO HOUSING. UNITIZED BALLAST/REFLECTOR IS SYSTEN SHALL BE HINGED AND REMOVABLE AS A UNIT, REFLECTOR IS SEALED AGAINST A E.P.D.M. GASKET.
FIXTURE SHALL HAVE A THERMAL AND IMPACT TEMPERED GLASS LENS, FUSED DISCONNECT INSIDE FIXTURE SO THAT WHEN DOOR IS OPENED THE BALLAST PRIMARY CIRCUIT IS BROKEN.
BALLAST SHALL BE CAPABLE OF STARTING AT -20 DEGREES F AND LUMINAIRE SHALL BEAR THE IBEW AND U.L. LABEL. LUMINAIRE SHALL ALSO HAVE OPTION OF USING PHOTOELECTRIC CONTROL RECEPTACLE, SINGLE OR DUPLEX AND BE ABLE TO BE WALL OR POLE MOUNTED.

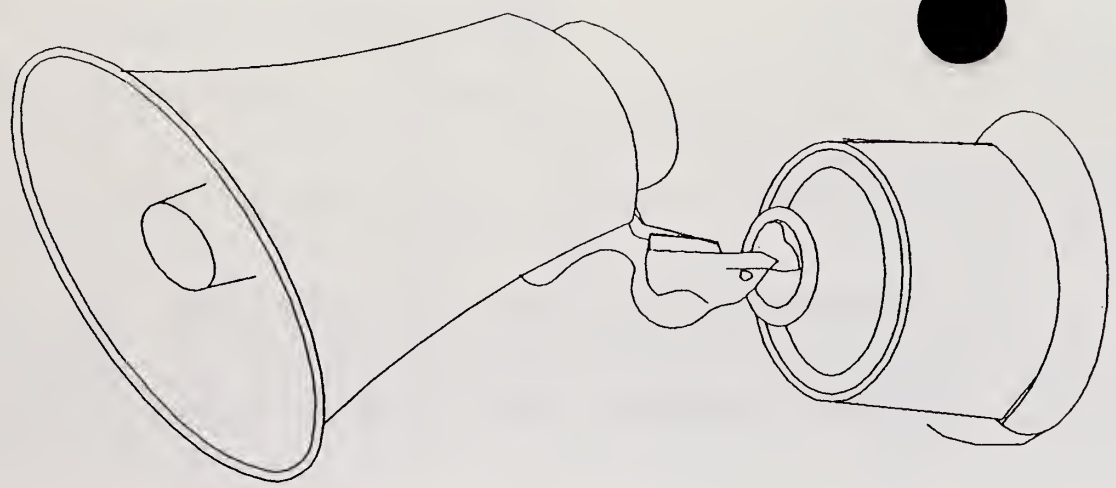
PROVIDE STERNER CAT. NO. EX20.
LAMP VOLTAGE 240V
BALLAST REGULATOR 11-13-88 PS-2D

LAMP C150S55 HIGH PRESSURE SODIUM
OR
C250S55 HIGH PRESSURE SODIUM

EFXCS007

11-16-88

U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE THE PACIFIC NORTHWEST REGION	ELECTRICAL FIXTURE CUT SHEETS
DRAWN DATE 11-16-88 DESIGNED DATE CHECKED DATE APPROVED DATE	EFXC 7 SHT. 7 OF 10



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ALARM HORM/SIREN

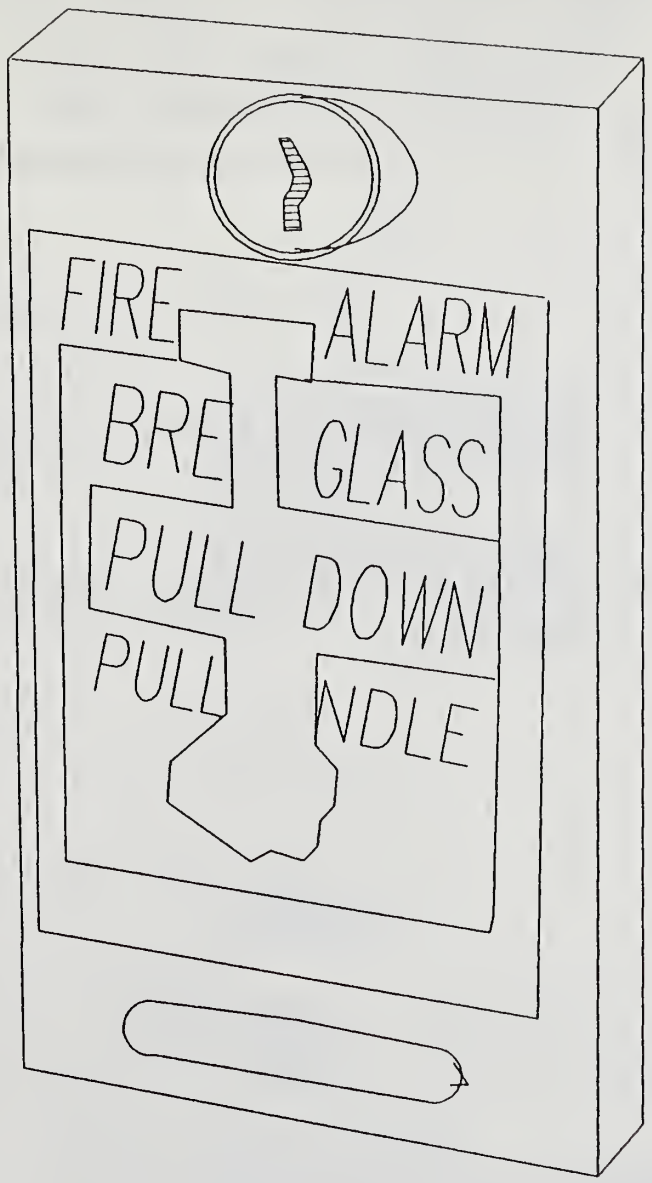
PROVIDE TAMPERPROOF HORN/SIREN WITH WEATHERPROOF BACK BOX, CAPABLE OF SWIVELING THROUGH 180° HORIZONTALLY AND 90° VERTICALLY.

NOMINAL OUTPUT AT 10 FEET:

HORN – 114 dB
SIREN – 112 dB

SIREN TONE TO RISE AND FALL FROM 300 – 3000 Hz. EVERY SECONDS.

POWER CONSUMPTION APPROXIMATELY 8.4 TO 12.5 VA D.C., 15.6 TO 33.6 VA A.C.
VOLTAGE: 12 120 A.C. OR D.C.



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FIRE ALARM STATION

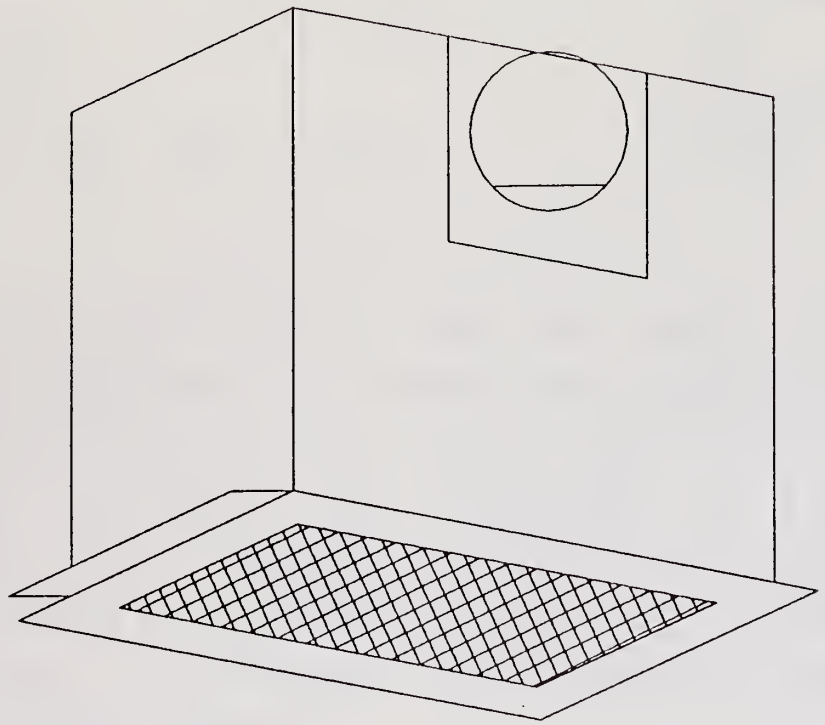
THE FIRE ALARM STATION SHALL HAVE HINGED HAMMER TO BREAK GLASS, PULL LEVER TO SOUND ALARM, KEY LOCK FOR TEST AND RESET AND CAN BE SURFACE OR SEMI-FLUSH MOUNTED.

FINISH SHALL BE HIGH IMPACT RED LEXAN - HIGH GLOSS PAINT.

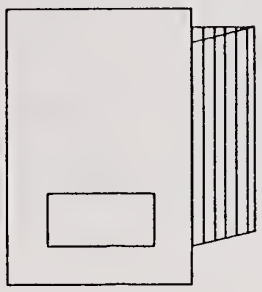
ALARM STATION SHALL BE UL LISTED.

FD-3
11-20-88

CEILING EXHAUST FAN



ELECTRICAL

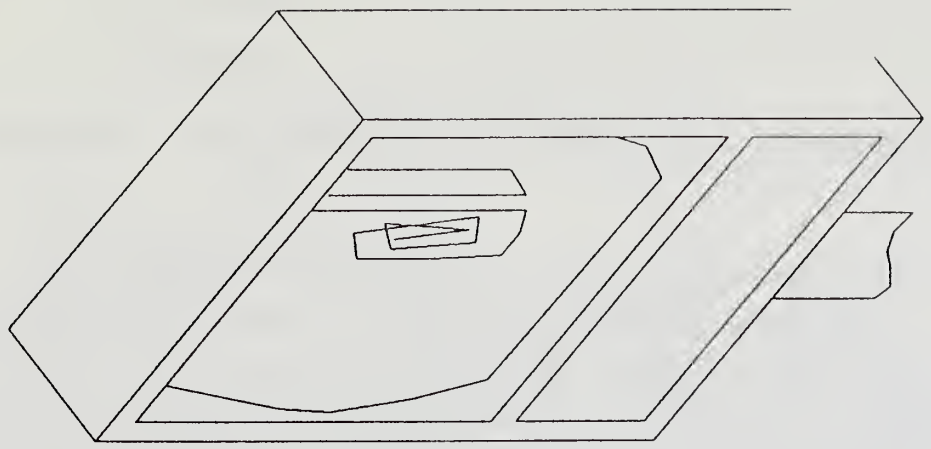


MANUAL
STARTER SWITCH
TOGGLE SWITCH WITH OR WITHOUT PILOT LIGHT. MOUNTED IN HANDY BOX WITH STAINLESS STEEL COVER PLATE. AVAILIBLE WITH OR WITHOUT OVER-LOAD PROTECTION.

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THE CEILING FAN HOUSING TO BE CONSTRUCTED OF PHOSPHATIZED STEEL WITH AN OVEN BAKED ENAMEL FINISH. GOUSING INTERIOR ACOUSTICALLY LINED WITH 1/2 INCH THICK INSULATION. DISCHARGE OUTLET ADAPTABLE TO HORIZONTAL OR VERTICAL POSITIONS. TERMINAL BOX INTERNALLY MOUNTED FOR MOTOR HOOK-UP. MOTOR MOUNTED ON RESILIENT ELASTIC GROMMETS. FAN TO HAVE A FOWARD CURVED CENTRIFUGAL WHEEL. FAN TO BEAR THE AMCA SEAL FOR AIR AND SOUND PERFORMANCE. FAN TO BE UL LISTED.

HORSEPOWER, CFM, VOLTAGE, AND PHASE AS SHOWN ON DRAWINGS.



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ROADWAY & AREA LUMINAIRE
150W OR 250W

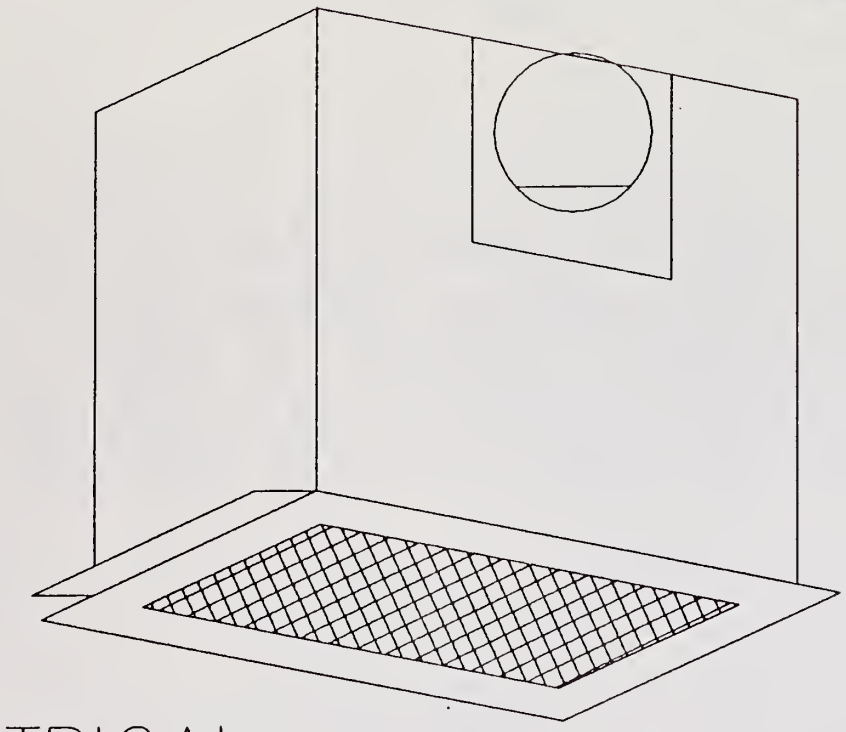
THE LUMINAIRE SIDEWALLS SHALL BE MITER-BEND CONSTRUCTION FROM A SINGLE PEICE OF ALUMINUM, CANOPY SHALL BE CRIMPED AND SEALED TO HOUSING. UNITIZED BALLAST/REFLECTOR IS SYSTEM SHALL BE HINGED AND REMOVABLE AS A UNIT, REFLECTOR IS SEAL-ED AGAINST A E.P.D.M. GASKET.
FIXTURE SHALL HAVE A THERMAL AND IMPACT TEMPERED GLASS LENS, FUSED DISCONNECT INSIDE FIXTURE SO THAT WHEN DOOR IS OPENED THE BALLAST PRIMARY CIRCUIT IS BROKEN.
BALLAST SHALL BE CAPABLE OF STARTING AT -20 DEGREES F AND LUMINAIRE SHALL BEAR THE IBEW AND U.L. LABEL. LUMINAIRE SHALL ALSO HAVE OPTION OF USING PHOTOELECTRIC CONTROL RECEPTACLE, SINGLE OR DUPLEX AND BE ABLE TO BE WALL OR POLE MOUNTED.

PROVIDE STERNER CAT. NO. EX20.
LAMP VOLTAGE 240V
BALLAST REGULATOR 11-13-88
HPS-20

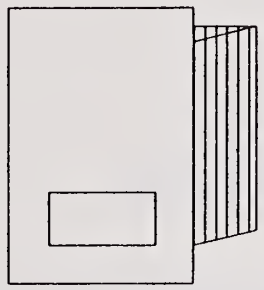
LAMP C150S55 HIGH PRESSURE SODIUM
OR
C250S55 HIGH PRESSURE SODI

HPS - 20 C250 - 5 HIGH PRESSURE SODI

CEILING EXHAUST FAN



ELECTRICAL



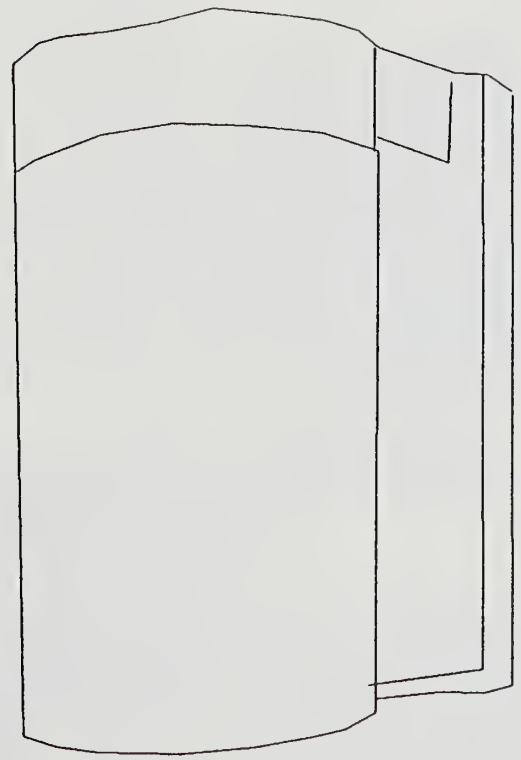
MANUAL
STARTER SWITCH
TOGGLE SWITCH WITH OR WITHOUT PILOT LIGHT. MOUNTED IN HANDY BOX WITH STAINLESS STEEL COVER PLATE. AVAILIBLE WITH OR WITHOUT OVER-LOAD PROTECTION.

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HORSEPOWER, CFM, VOLTAGE, AND PHASE AS SHOWN ON DRAWINGS.

EXTERIOR WALL BRAC T



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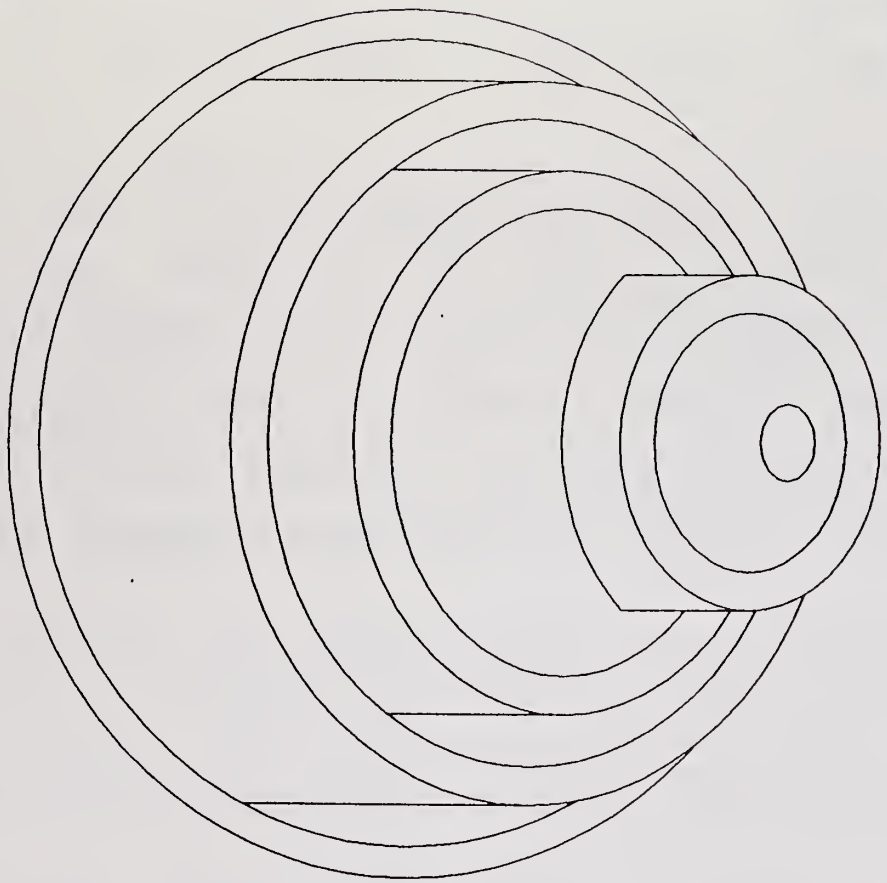
FIXTURE SHALL BE DIE-CAST ALUMINUM CONSTRUCTION. SHALL FIT BOTH 3 1/4" AND 4" OUTLET BOXES AND SHALL BE EQUIPPED WITH HEAQTPROOF NEOPRENE GASKET. THE GLOBE SHALL BE SCREW-IN OPALESCENT GLASS. FIXTURE SHALL BEAR THE UL LABEL.

11-20-88
I-1

LAMP
1-100W

11-20-88
1-1

LAMP
1-100W



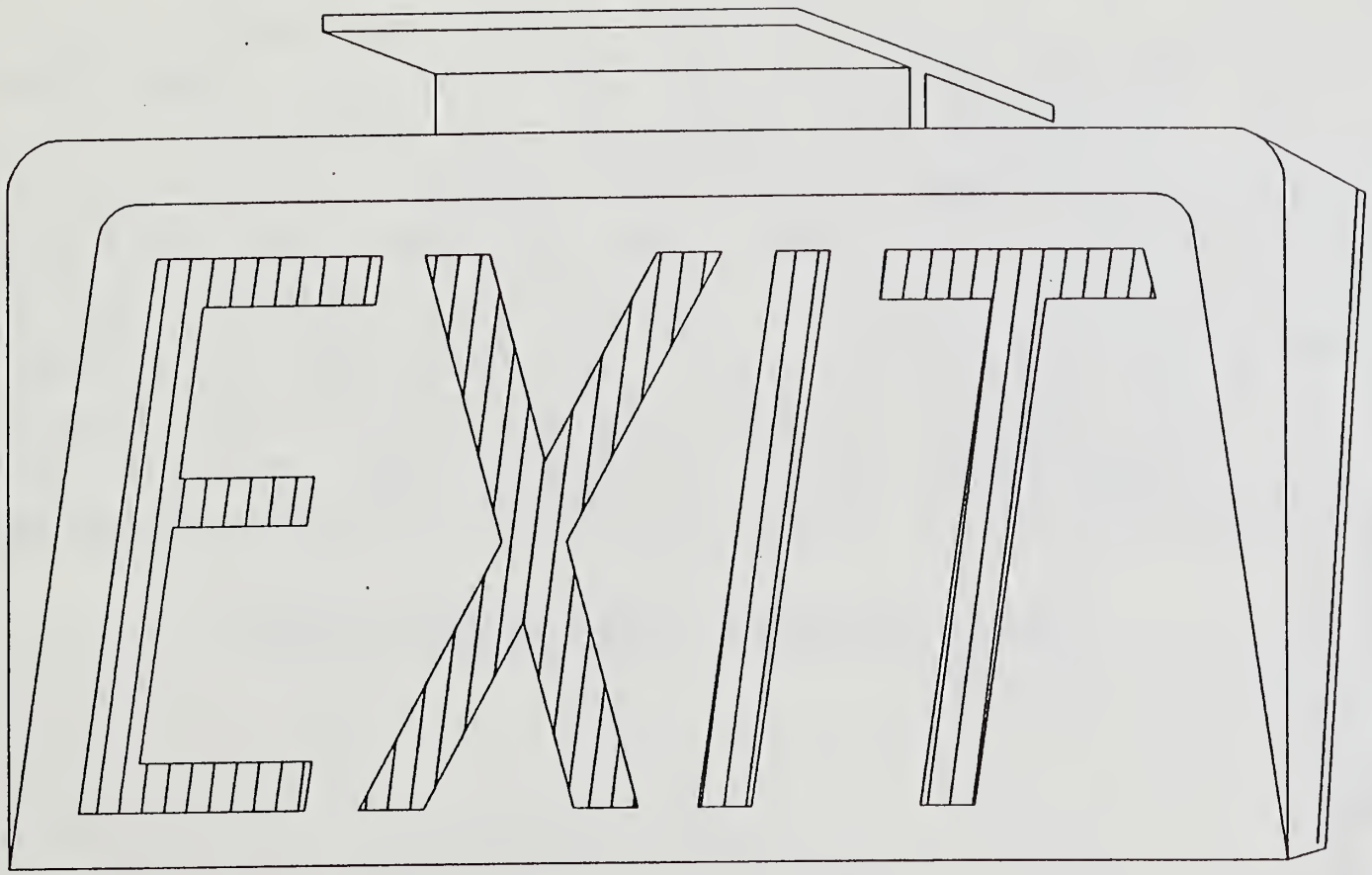
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DIRECT DRIVE WALL EXHAUST FAN

WALL MOUNTED EXHAUST FAN SHALL HAVE SPUN ALUMINUM CORROSION RESISTANT HOUSING WITH STAINLESS STEEL FASTENINGS. UNIT SHALL BE EQUIPPED WITH AUTOMATIC BACKDRAFT DAMPER, STEEL U-SPRING SUSPENSION FOR VIBRATION ISOLATION, AND STANDARD ROUND DUCT FITTINGS FOR DUCTED INSTALLATIONS. EXHAUST FAN SHALL HAVE BALANCED FAN AND HUB FOR QUIET OPERATION, PRELUBRICATED BALL BEARING TYPE DRIVE, INTERNAL ALUMINUM WIRING POST FOR CONDUIT, AND BE U.L. APPROVED FOR EXTERIOR WALL MOUNTING. MOTOR TO BE EXPLOSION PROOF. PROVIDE PVC COATED BIRD AND BUG SCREEN AND FIXED-OPEN ALUMINUM LOUVER. DISCHARGES AIR OUT AND AWAY FROM BUILDING. HP, CFM, VOLTAGE AND PHASE AS SHOWN ON DRAWINGS.

E-47
11-20-88

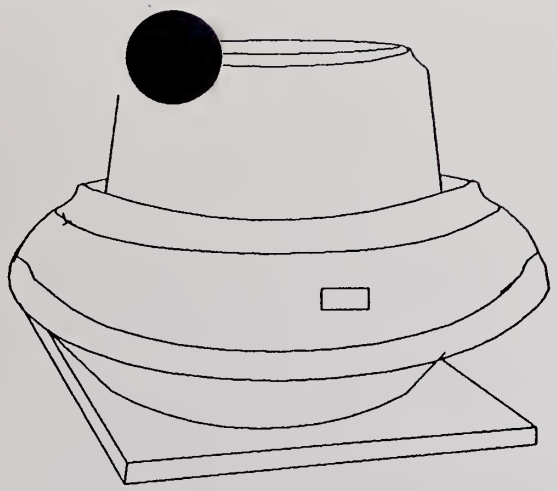
EXIT LIGHT

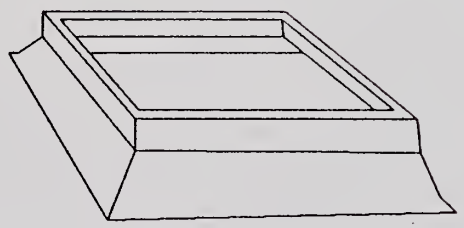


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FIXTURE SHALL HAVE STAINLESS STEEL FRAME AND SIGN BACK-GROUND WITH SATIN FINISH. PLASTIC FACE WITH GREEN SIX-(6) INCH LETTERS. SINGLE FACE. WIRED WITH SIX (6) MINIATURE LAMPS. DIMENSIONS SHALL BE APPROXIMATELY 7 1/2" INCHES HIGH BY 11 5/8" WIDE BY 2 INCHES THICK. BRACKET HANGER DEVICE SHALL BE SUITABLE FOR TOP, END OR BACK MOUNTING.

LAMPS 11-13-88 SIX (6) 1-WATT MINIATURE PANEL
I-21 BOARD INDICATOR LAMPS





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DIRECT DRIVE ROOF EXHAUST FAN

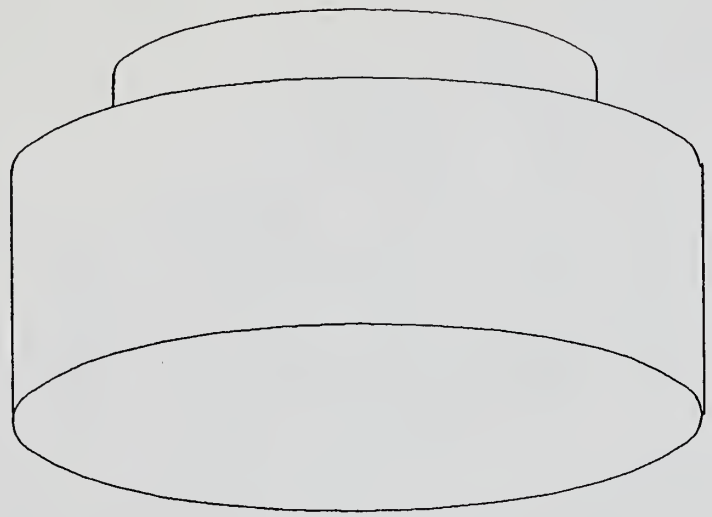
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PROVIDE A PREMANUFACTURED OR CUSTO M BUILT CURB AND FLASHING SUITABLE FOR MOUNTING THE ROOF MOUNTED EXHASUT FAN. COORDINATE THE SIZE, LOCATION AND MOUNT-ING OF THE CURB WITH THE STRUCTURE TO INSURE A WEATHERPROOF INSTALLATION.

CFM, VOLTAGE AND PHASE AS SHOWN ON THE DRAWINGS.

INTERIOR CEILING FIXTURE



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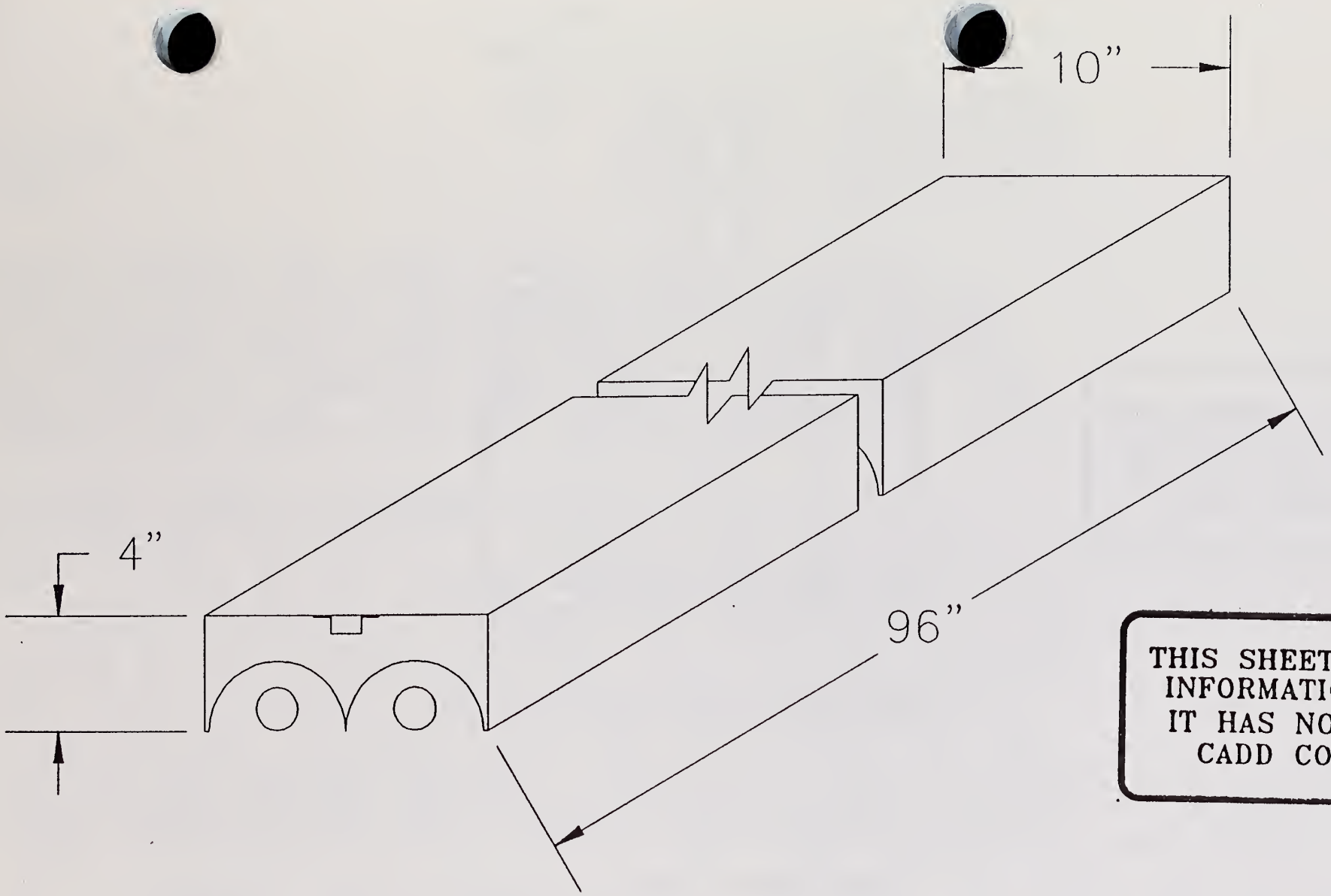
FIXTURE SHALL CONSIST OF A ONE PIECE 18 GAUGE ALUMINUM CEILING PAN, OR MAY BE DIE-CAST ALUMINUM. LATCHING DEVICES SHALL PREVENT GLASS SHADE FROM DROPPING. GLASS SHALL BE HAND BLOWN OPALESCENT. FIXTURE SHALL BE SUITABLE FOR 3 1/4" OR 4" OUTLET BOXES. SATIN CHROME FINISH. FIXTURE SHALL BEAR UL LABEL.

	MIN. DIAM	MIN. OVERALL HT.
I-3	8"	4"
I-4	10"	4 1/2"
I-5	14"	5 1/2"

LAMPS

I-3	1 - 60W
I-4	2 - 60W
I-5	4 - 60W OR 2 100W

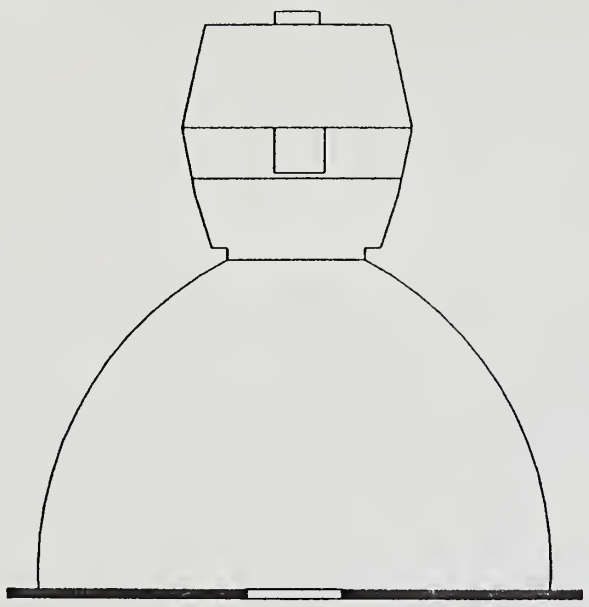
11-20-88



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FLOURESCENT FIXTURE WITH TWO PARABOLIC SHAPED, SPECULAR ANODIZED ALUMINUM REFLECTORS TO CONCENTRATE LIGHT IN A 30° ZONE FROM VERTICAL. LIGHT OUTPUT A MINIMUM OF 68% OF AVAILIBLE LAMP OUTPUT ON GROWING SURFACE. PROVIDE CHAIN HANGERS AND CORD CONNECTIONS. PROVIDE JD 21 LIGHTING SYSTEMS FIXTURE NO. SG-297SHO OR APPROVED EQUAL.

LAMPS		2-F96T12WW
BALLAST	11-12-88	RAPID START 1500MA
VOLTAGE	F-50	120 VAC, 60 HZ.



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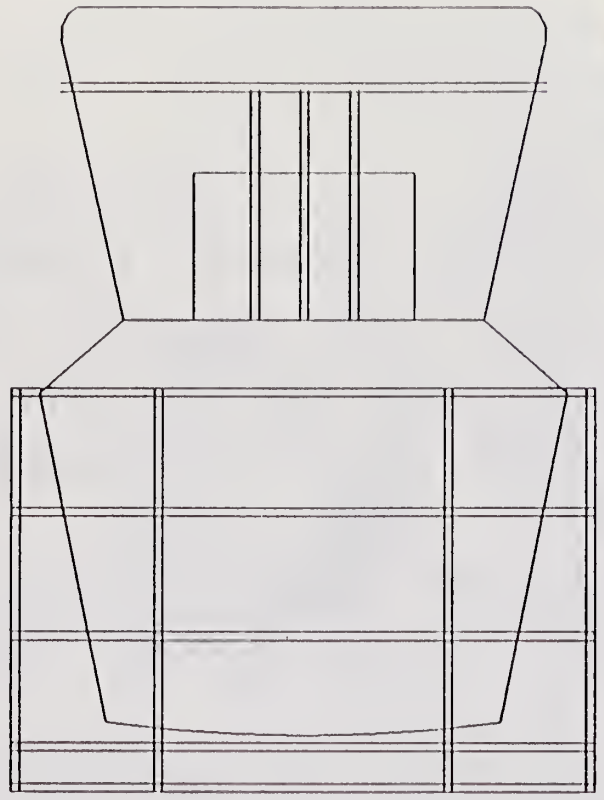
AILES – STACK, METAL HALIDE LUMINAIRE

METAL HALIDE FIXTURE WITH INTEGRAL HIGH POWER FACTOR BALLAST WITH OPTICAL CONTROL PRISMATIC GLASS REFLECTOR BELOW FIXTURE TO DIRECT LIGHT INTO AILE STACKS TO MIN-IMIZE GLARE. DISTRIBUTION PATTERN TO BE RECTANGULAR. FIXTURE TO BE DESIGNED FOR WIDE AISLE LIGHTING. VOLTAGE AS SHOWN ON DRAWINGS. FURNISH WITH VERTICAL FOOT CAN-DLES, 15 FEET BELOW FIXTURE, 10 FEET TO SIDE OF FIXTURE WITH FIXTURE CENTERED IN A 10 FOOT AISLE, ON STACK TO 2.5 FOOT CANDLES MINIMUM.

FURNISH WITH 250W TUNGSTEN HALOGEN EMERGENCY TRANS-FER SYSTEM TO TRANSFER LIGHT SOURCE FROM MAIN LAMP TO AUXILIARY LAMP DURING MOMENTARY POWER OUTAGES. LAMP TO RETRANSFER WHEN METAL HALIDE LAMP IS REIG-NITED. FURNISH WITH RIGID CONDUIT SWIVEL HANGERS.

LAMP	1 PHOSPHOR COATED METAL HALIDE BT-37 400W LAMP
BALLAST	PEAK LEAD AUTO TRANSFORMER

MH-2
11-20-88



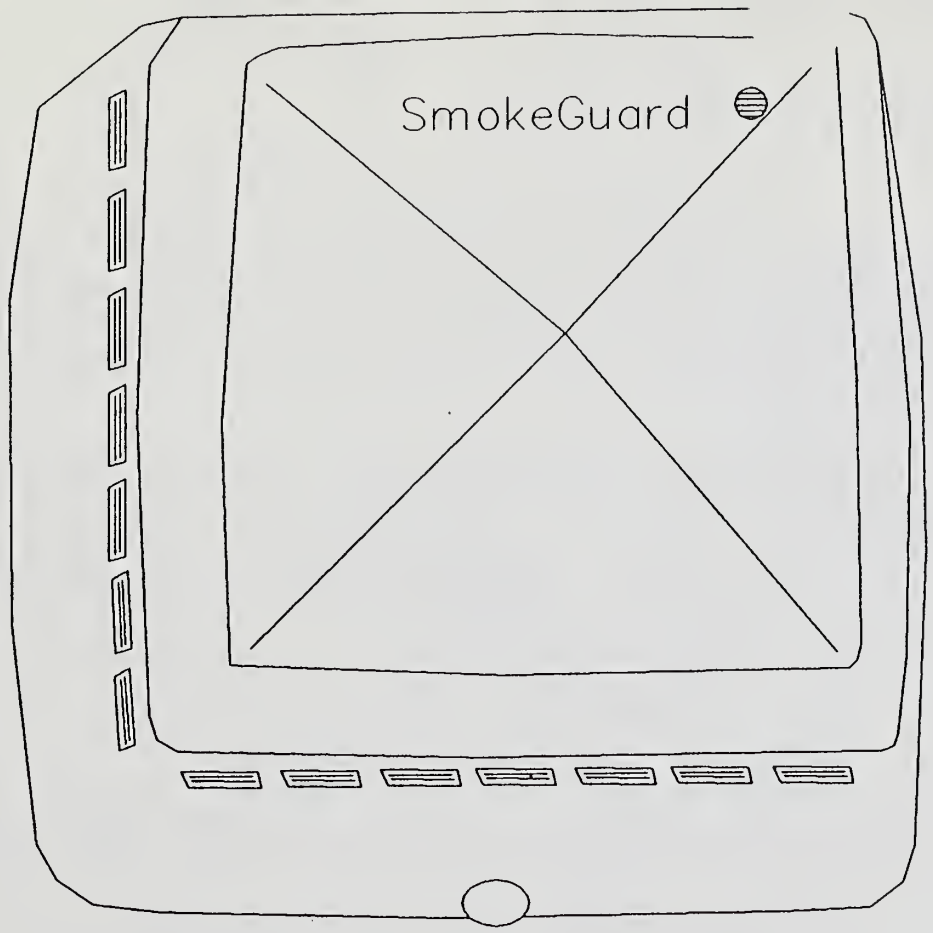
THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

METAL HALIDE LUMINAIRE

METAL HALIDE FIXTURE SHALL HAVE BALLAST CLASS "H" INSULATED, −20°F STARTING, 60 HZ REGULATED HIGH POWER FACTOR TYPE. UNIT SHALL BE U.L. 57 LISTED AS "SUITABLE FOR WET LOCATIONS" AND 55° AMBIENT OPERATION. ENCLOSED AND GASKETED UNIT SHALL BE FURNISHED WITH A THERMAL SHAOCK−AND IMPACT−RESIS− TANT GLASS REFRACTOR, PRODUCING A TYPE ASSEMETRICAL DIST− RIBUTION. REFRACTOR TO BE FURNISHED WITH WIRE GUARD.

FURNISH WITH 150 WATT, QUARTZ LAMP STANDBY SYSTEM − ON WHEN POWER IS RESTORED: OFF WHEN H.I.D. LAMP RESTRIKES. FURNISH WITH RIGID CONDUIT STEM HANGERS.

LAMP		1−175 WATT CLEAR METAL HALIDE
BALLAST	11−13−88	BT−28
	MH−4	PEAK LEAD AUTO TRANSFORMER



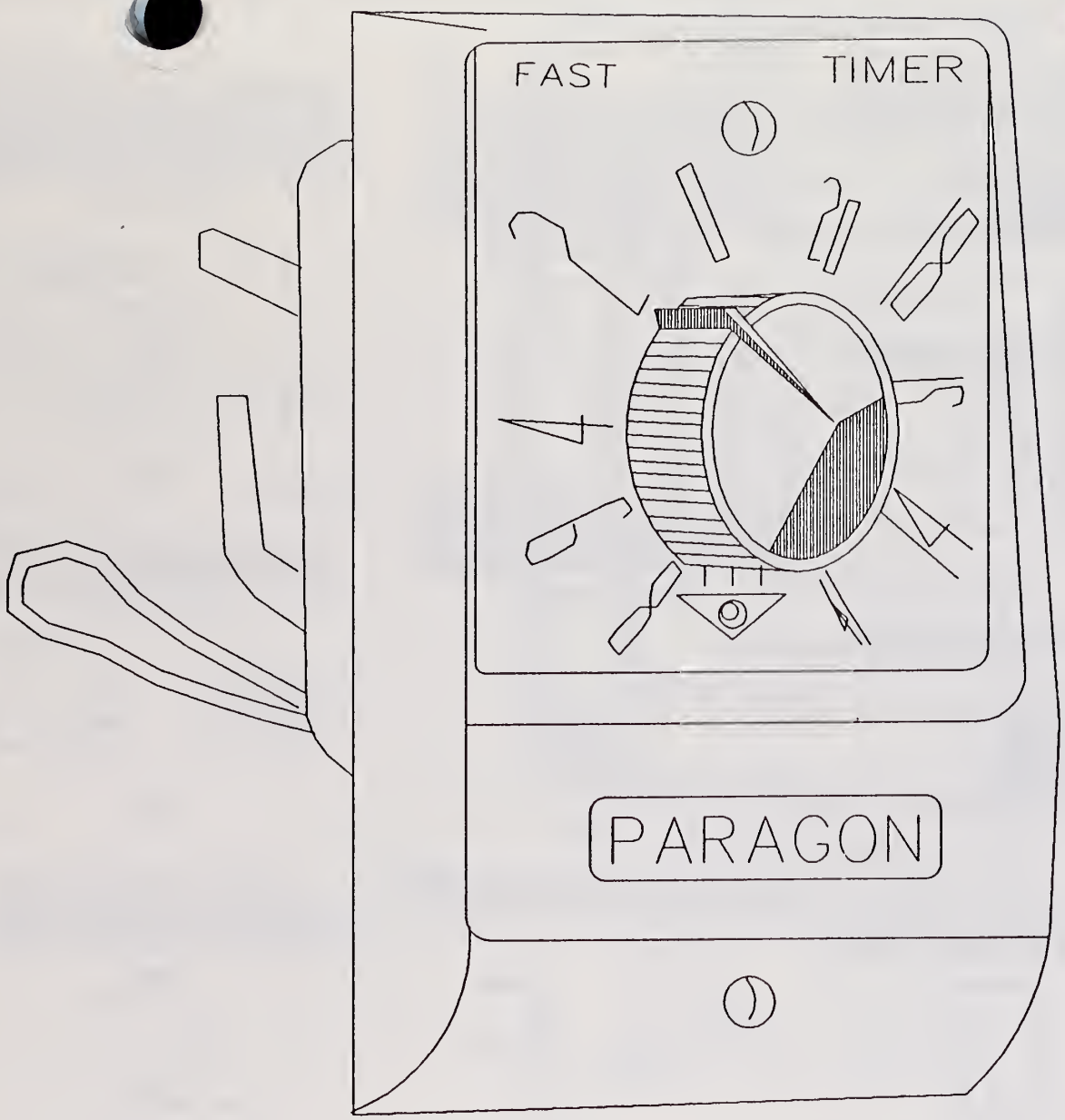
THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

BATTERY POWERED IONIZATION TYPE SMOKE DETECTOR

SMOKE DETECTOR SHALL BE BATTERY POWERED IONIZATION TYPE, CEILING MOUNT, WITH SOLID STATE ALARM CIRCUITRY.

UNIT SHALL HAVE BATTERY FAILURE INDICATION, ADJUSTABLE SENSITIVITY CONTROL AND 85 DECIBAL ALARM HORN. DETECTOR SHALL HAVE AT LEAST 40° TO 100°F TEMPERATURE RANGE AND 0 TO 95°R.H. HUMIDITY RANGE AND FIT 3" OCTAGNAL OUTLET BOX. SUPPLY WITH 3 – 4.5 VOLT ALKALINE BATTERIES, U.L. LISTED.

FD–2
11–20–88



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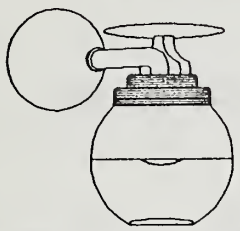
FLUSH MOUNTED INTERVAL TIMER

THE TIMER SHALL BE 120V WITH 1600 WATT CAPACITY AND HAVE A DIAL RANGE FROM 0–30 MINUTES. TIMER SHALL BE UL APPROVED. DIAL GRADUATIONS 1/2 MINUTES.

TS–2
11–13–88

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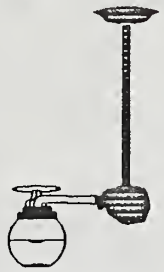
L.P. GAS LAMP - BRACKET TYPE



LAMP SHALL BE DESIGNED FOR LIQUID PETROLEUM GAS OPERATION. IT SHALL BE ALL ALUMINUM CONSTRUCTION WITH A POLISHED ALUMINUM FINISH. GLOBE SHALL BE 5 1/2"-INCH MINIMUM DIAMETER, HEAT RESISTANT, OVEN GLASS TYPE WITH FULL FROSTED FINISH. LAMP SHALL BE EQUIPPED WITH HIGH TEMPERATURE CERAMIC BURNER NOSE COMPLETE WITH SHOCK-RESISTANT MANTLE.

G-1
12-2-88

L.P. GAS LAMP - PENDANT TYPE



LAMP SHALL BE DESIGNED FOR LIQUID PETROLEUM GAS OPERATION. IT SHALL BE ALL ALUMINUM CONSTRUCTION WITH A POLISHED ALUMINUM FINISH. GLOBE SHALL BE 5 1/2"-INCH MINIMUM DIAMETER, HEAT RESISTANT, OVEN GLASS TYPE WITH FULL FROSTED FINISH. LAMP SHALL BE EQUIPPED WITH PENDANT, HIGH TEMPERATURE CERAMIC BURNER NOSE , AND SHOCK-RESISTANT MANTLE. OVERALL LENGTH SHALL NOT EXCEED 25 3/4" INCHES.

G-2
12-2-88



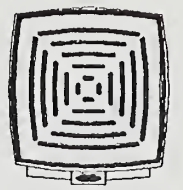
LINE VOLTAGE POWERED
IONIZATION TYPE SMOKE DETECTOR

SMOKE DETECTOR SHALL BE IONIZATION TYPE, CEILING MOUNT, WITH SOLID STATE ALARM CIRCUITRY. UNIT SHALL HAVE VISUAL POWER SUPPLY INDICATOR AND 85 DECIBAL ALARM HORN.

DETECTOR SHALL HAVE AT LEAST 40° TO 100°F TEMPERATURE RANGE, 0 TO 95% R.H. HUMIDITY RANGE, AND SHALL FIT 3" OCTAGONAL OUTLET BOX.

120 VOLT A.C., UL LISTED

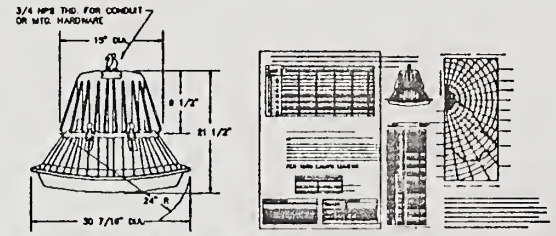
FD-1
12-2-88



ALARM HORN

PROVIDE WEATHERPROOF, TAMPERPROOF ALARM HORN NEMA 4 CONSTRUCTION. 3.5 WATTS MAXIMUM AT 24 O.C. AS SHOWN ON DRAWINGS. 100 DECIBEL OUTPUT AT A FREQUENCY OF 400 Hz, AT A DISTANCE OF 10 FEET. SURFACE OR CONDUIT MOUNT, 3/4" NPT DRILLED AND TAPPED. OVERALL DIMENSIONS SHALL BE APPROXIMATELY 4 7/8" SQUARE X 2 5/8" DEEP.
USE EDWARDS CATALOG #877-81 OR APPROVED EQUAL.

E-55
12-2-88



HPS-13 400 WATT LOWMOUNT HIGH PRESSURE SODIUM (WEATHER PROOF)

FIXTURE SHALL HAVE DIECAST ALUMINUM BALLAST HOUSING, SPUN ALUMINUM REFLECTOR, ALZAK PROTECTED INSIDE AND OUT. REFLECTOR SHALL BE GASKETED AND SPUN ONTO REFLECTOR FOR MAXIMUM SEAL RELIABILITY. PROVIDE ENCLOSED ACTIVATED CHARCOAL FILTER.

REFLECTOR SHALL BE UV STABILIZED INJECTION MOLDED ACRYLIC PLASTIC.

PROVIDE LUMINAIRE WITH GASKETS AT ALL POINTS WHERE WATER AND DUST ENTRY IS PROBABLE. ALL EXTERNAL HARDWARE TO BE STAINLESS STEEL.

THE BALLAST SHALL START, AND OPERATE THE LAMP IN AMBIENT TEMPERATURES DOWN TO 20 DEGREES F. THE FIXTURE SHALL OPERATE WITH INPUT VOLTAGE VARIATIONS OF PLUS OR MINUS 10% FROM NOMINAL. AT RATED LINE VOLTAGE THE BALLAST SHALL HAVE A MINIMUM POWER FACTOR OF 95%.

THE COEFFICIENT OF UTILIZATION SHALL BE NOT LESS THAN .57 BASED ON A CEILING REFLECTANCE OF 50%, WALL REFLECTANCE OF 30%, FLOOR REFLECTANCE OF 20%, AND A ROOM CAVITY RATIO OF 2. EACH UNIT SHALL BE COMPLETELY WIRED AND EQUIPPED WITH ALL AUXILIARIES.

PROVIDE A BACKUP 250 WATT SINGLE ENDED BAYONET TYPE QUARTZ LAMP, LAMP WILL
REMAIN ON UNTIL HID LAMP REACHES 60% OF FULL LIGHT OUTPUT.

PROVIDE G.E. MODEL LOW MOUNT 400 OR APPROVED EQUAL.

LAMP		(1) 400 WATT CLEAR HIGH PRESSURE SODIUM
BALLAST	HPS-13	REGULATOR, VOLTAGE AS SHOWN ON DRAWINGS

12-10-88

WALL SWIVEL FIXTURE
DTEDXT



FIXTURE SAHLL BE SOLID ALUMINUM. UNIT SHALL BE SUITABLE FOR 3 1/2" OR 4" OUTLET BOX MOUNTING. EQUIPPED WITH ON-OFF SWITCH. PORCELAIN SOCKET. MINIMUM DIAMETER OF SHADE SHALL BE 4 3/4", MINIMUM HEIGHT 7 3/4". FINISHED IN NATURAL ALUMINUM. ROTATTION 350° MINIMUM AND ANGLE ADJUSTMENT 90° MINIMUM. FIXTURE SHALL BEAR THE UL LABEL.

I-12	1 - 75W
LAMP	

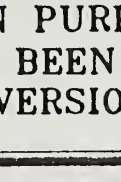
12-2-88

ALARM BELL FOR OUTDOORS



PROVIDE ALARM BELL, VIBRATING TYPE, MOUNTED IN YARD HOOD TO PROTECT AGAINST TAMPERING AND PILFERAGE. NOMINAL POWER INPUT 3.5 VOLTAMPS. VOLTAGE, CURRENT AND DIMENSIONS AS DESCRIBED IN DRAWINGS. OUTPUT LEVEL 92-98 dB AT 10 FEET.

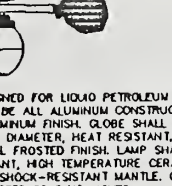
E-43
12-2-88



CAPILLARY BULB THERMOSTAT

PROVIDE THERMOSTAT WITH KNOB CALIBRATED IN °F FOR RANGE SHOWN ON DRAWINGS WITH APPROXIMATELY A 3-10° ADJUSTMENT DIFFERENTIAL. PROVIDE SINGLE POLE DOUBLE THROW CONTACTS RATED 8.0 A FLA, 48.0 A LRA AT 120VAC. PROVIDE 5' LENGTH CAPILLARY BULB OF COPPER. NEMA 1 ENCLOSURE WITH 1/2" CONDUIT KNOCK-OUTS. PROVIDE MOUNTING CLAMP FOR CAPILLARY BULB. HONEYWELL T675 A SERIES OR APPROVED EQUAL.

E-48
12-2-88

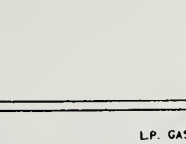


MEDIUM BAY METAL HALIDE LUMINAIRE

METAL HALIDE FIXTURE WITH INTEGRAL HIGH POWER FACTOR BALLAST WITH OPTICAL CONTROL PRISMATIC GLASS REFLECTOR WITH SELF INDUCED CHIMNEY CLEANING ACTION. PROVIDE WITH MINIMUM COEFFICIENT OF UTILIZATION USING ZONAL CAVITY METHOD OF FLOOR 20%, CEILING 50%, WALL 50%, RCR OF 4, CU. - 0.68 MINIMUM. VOLTAGE AS SHOWN ON DRAWINGS.
FURNISH WITH 250W TUNGSTEN HALOGEN EMERGENCY TRANSFER SYSTEM TO TRANSFER LIGHT SOURCE FROM MAIN LAMP TO AUXILIARY LAMP DURING MOMENTARY POWER OUTAGES. LAMP TO RETRANSFER WHEN METAL HALIDE LAMP IS REIGNITED. FURNISH WITH RIGID CONDUIT SWIVEL HANGERS.

LAMP	1 CLEAR METAL HALIDE BT-37 400W LAMP
BALLAST	PEAK LEAD AUTO TRANSFORMER

WH-1
12-2-88



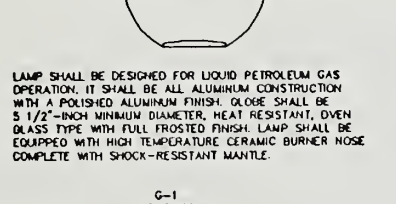


REVOLVING ALARM LIGHT

PROVIDE A MOTORIZED REVOLVING ALARM LIGHT WITH A PARABOLIC REFLECTOR, 25 WATT LIGHT, HEAT RESISTANT POLYMER RED LENS, 1/2" CONDUIT MOUNT, 360° REVOLUTION OF LIGHT REFLECTOR. SUPPLY WITH CAST ALUMINUM, GREY HAMMERTONE WALL MOUNT BRACKET.

VOLTAGE 24VDC	MAXIMUM WATTS 50

E-50
12-2-88



ELECTRIC HAND DRYER

DRYER SHALL BE EQUIPPED WITH A HEAVY DUTY, 1/10 HP SEALED BALL-BEARING MOTOR, UNIVERSAL TYPE, 7500 RPM AT RATED LOAD, PROTECTED BY A BI-METALLIC CIRCUIT BREAKER CONNECTED DIRECTLY TO THE HEATING ELEMENT, ELECTRICAL RATING 2300 WATTS, 115 VOLTS WITH 30 SECOND TIMED CYCLE. COVER SHALL BE A ONE PEICE GREY IRON CASTING FINISH WITH ACID-RESISTING PORCELAIN ENAMEL, FITTED WITH AN AIR OUTLET OPENING OF METAL VANES 5/8" DEEP, SPACED 1/4" APART, AND COVERED BY A CHROME-PLATED ZINC CAST NOZZLE TO DIRECT THE AIR FLOW. ALL COMPONENTS OF DRYER SHALL BE WARRANTED FOR FIVE YEARS.



HUMIDISTAT

PROVIDE HUMIDISTAT WITH KNOB FROM 10% TO 90% RH WITH APPROXIMATELY 4% DIFERENTIAL WITH SINGLE POLE DOUBLE THROW CONTACTS. CONTACTS RATED 8.0A MINIMUM AT 120VAC, 36.0 LOCKED ROTOR AMPS MINIMUM. UNIT SHALL FIT STANDARD 2" X 4" OUTLET BOX. SENSING ELEMENT HUMAN HAIR. NEMA 1 ENCLOSURE PENN-BASO CATALOG W42AA-1 OR EQUAL.

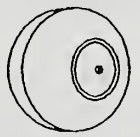
E-49
12-2-88



DEHUMIDIFIER

REFRIGERATION TYPE DEHUMIDIFIER WITH HUMIDISTAT, DRAIN HOSE, 14 PINT PER DAY WATER REMOVAL CAPACITY. UNIT POWER 120 VAC. 60 Hz. 250 WATTS MAXIMUM POWER INPUT.

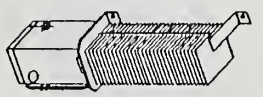
E-39
12-2-88



ALARM BELL

PROVIDE ALARM BELL, VIBRATING TYPE. OUTPUT LEVEL 92-98 dB AT 10 FEET. NOMINAL POWER INPUT 3.5 VOLTAMPS. VOLTAGE, AND DIMENSIONS AS DESCRIBED IN DRAWINGS.

E-42
12-2-88



CONVECTION UNIT HEATER

HOUSING SHALL BE CAST ALUMINUM GRID WITH NICKEL CHROMIUM RESISTANCE WIRE INSULATED IN MAGNESIUM OXIDE, SHEATHED IN A PROTECTIVE JACKET ANS CAST INTO THE ALUMINUM GRID. PROVIDE LIQUID BULB HYDRAULIC THERMOSTAT RANGE 40° - 80°. HEATER HOUSING, ENCLOSING WIRING AND CONTROL, FORMED STEEL CORROSION TREATED BAKED ON ENAMEL FINISH. OPERATING VOLTAGE - 120 VAC, 500 WATT CAPACITY, APPROXIMATE DIMENSIONS [illegible] 6" X 5".

H-9
12-2-88



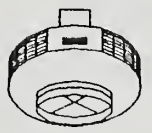
EXPLOSION - PROOF FIXTURE

CLASS I GROUP D EXPLOSION-PROOF FIXTURE, WITH PRISMATIC GLOBE, CAST METAL GUARD AND REFLECTOR. PROVIDE CEILING MOUNT JUNCTION BOX. FIXTURE RATED 150-300 WATTS.

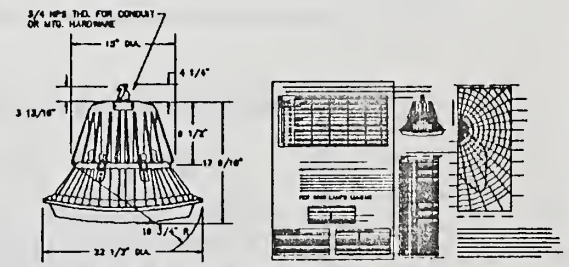
LAMP	1-200W A-19

E-41
12-2-88

I-27
12-2-88



M-8
12-2-88



HPS-12 150 WATT LOWMOUNT HIGH PRESSURE SODIUM (WEATHER PROOF)

FIXTURE SHALL HAVE DIECAST ALUMINUM BALLAST HOUSING, SPUN ALUMINUM REFLECTOR, ALZAK PROTECTED INSIDE AND OUT. REFLECTOR SHALL BE GASKETED AND SPUN ONTO REFLECTOR FOR MAXIMUM SEAL RELIABILITY. PROVIDE ENCLOSED ACTIVATED CHARCOAL FILTER.

REFLECTOR SHALL BE UV STABILIZED INJECTION MOLDED ACRYLIC PLASTIC.

PROVIDE LUMINAIRE WITH GASKETS AT ALL POINTS WHERE WATER AND DUST ENTRY IS PROBABLE. ALL EXTERNAL HARDWARE TO BE STAINLESS STEEL.

THE BALLAST SHALL START, AND OPERATE THE LAMP IN AMBIENT TEMPERATURES DOWN TO 20 DEGREES F. THE FIXTURE SHALL OPERATE WITH INPUT VOLTAGE VARIATIONS OF PLUS OR MINUS 10% FROM NOMINAL. AT RATED LINE VOLTAGE THE BALLAST SHALL HAVE A MINIMUM POWER FACTOR OF 95%.

THE COEFFICIENT OF UTILIZATION SHALL BE NOT LESS THAN .87 BASED ON A CEILING REFLECTANCE OF 50%, WALL REFLECTANCE OF 30%, FLOOR REFLECTANCE OF 20%, AND A ROOM CAVITY RATIO OF 2. EACH UNIT SHALL BE COMPLETELY WIRED AND EQUIPPED WITH ALL AUXILIARIES.

PROVIDE A BACKUP 150 WATT SINGLE ENDED BAYONET TYPE QUARTZ LAMP. LAMP WILL
REMAIN ON UNTIL HID LAMP REACHES 60% OF FULL LIGHT OUTPUT.

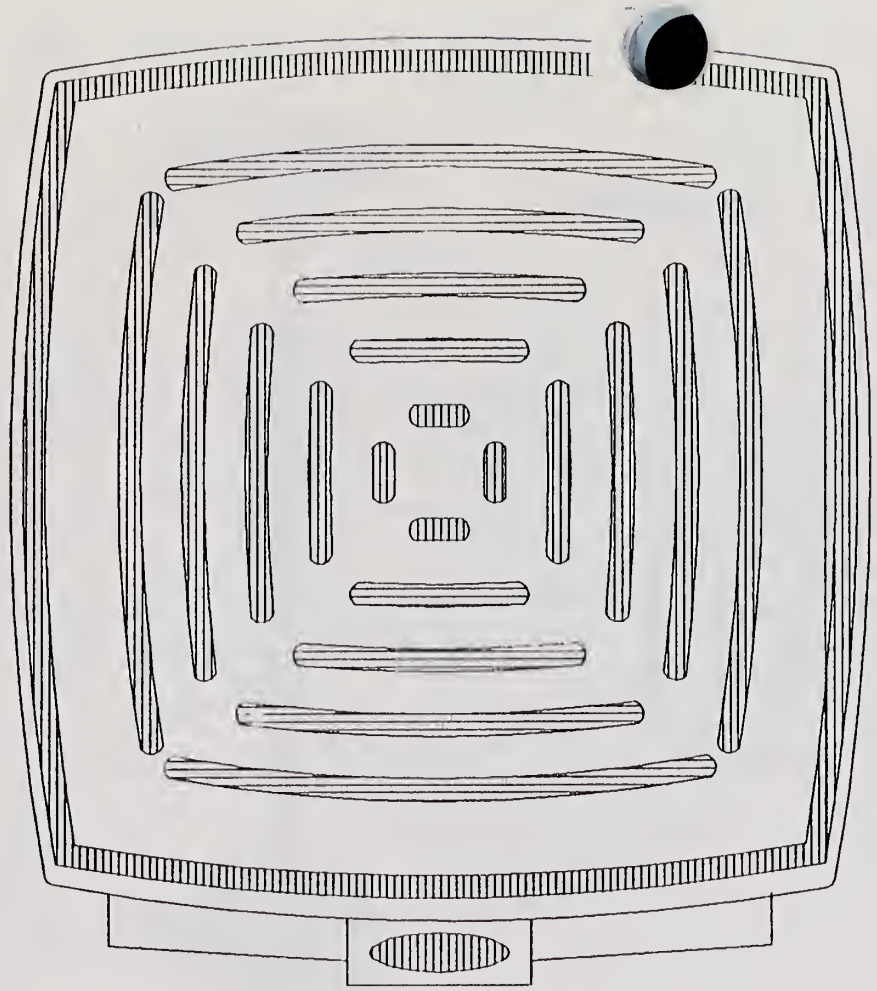
PROVIDE G.E. MODEL LOW MOUNT 150 OR APPROVED EQUAL.

LAMP		(1) 150 WATT CLEAR HIGH PRESSURE SODIUM
BALLAST	HPS-12	REGULATOR, VOLTAGE AS SHOWN ON DRAWINGS

12-10-88

ALL BLOCKS ARE INSERTED @ 1:1.
DSIZE SHEET WAS PLOTTED @ 1:1.

EFXCS008 12-12-8	U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE THE PACIFIC NORTHWEST REGION	ELECTRICAL CUT SHEETS
	DRAWN [illegible] DATE 12-12-88	EFXCS [illegible] SHT 8
	DESIGNED ____ DATE ____	OF 10
	CHECKED ____ DATE ____	
	REVIEWED ____ DATE ____	



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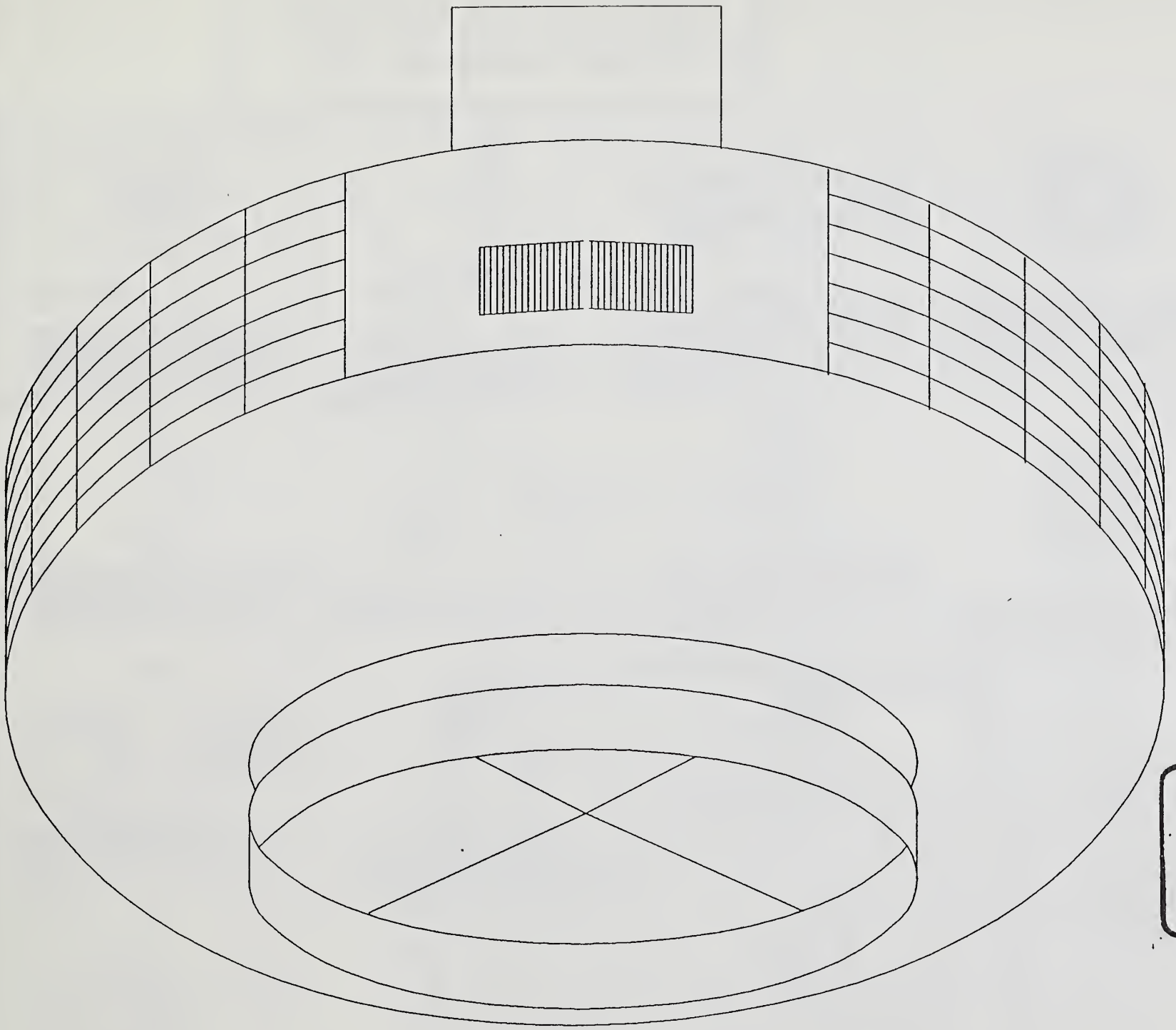
ALARM HORN

PROVIDE WEATHERPROOF, TAMPERPROOF ALARM HORN NEMA 4 CONSTRUCTION. 12 WATTS MAXIMUM AT 120 VAC AS SHOWN ON DRAWINGS. 100 DECIBEL OUTPUT AT A FREQUENCY OF 400 Hz., AT A DISTANCE OF 10 FEET. SURFACE OR CONDUIT MOUNT. 3/4" NPT DRILLED AND TAPPED. OVERALL DIMENSIONS SHALL BE APPROXIMATELY 4 7/8" SQUARE X 2 5/8" DEEP.

~~E-41~~

12-2-88

241

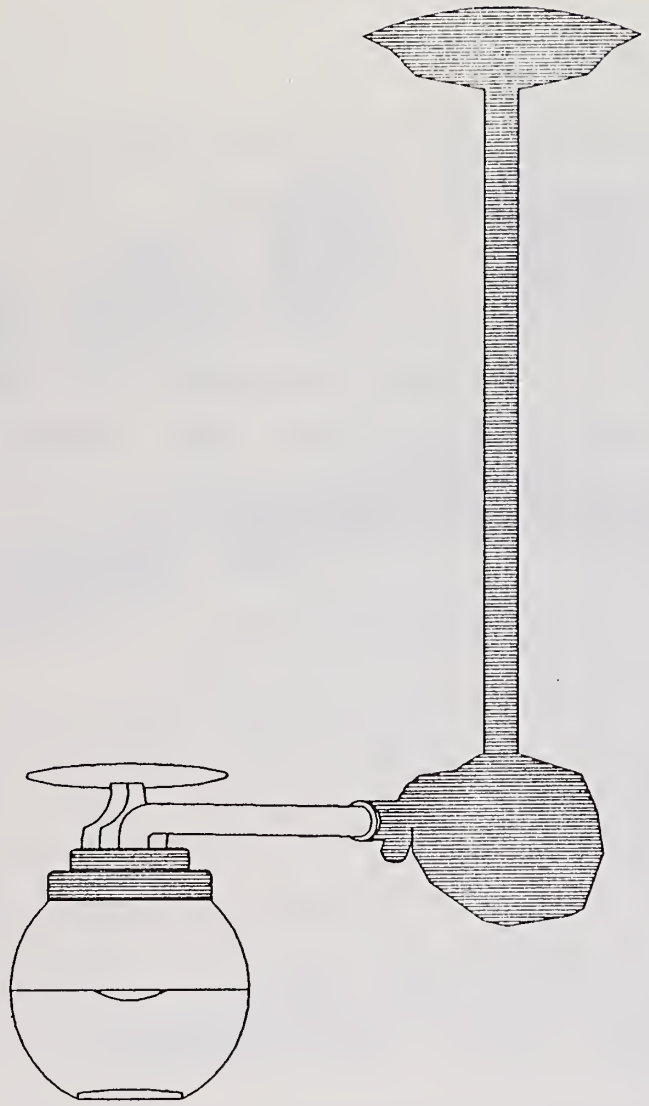


THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

~~M-8~~ ~~H-8~~ H8

12-2-88

L.P. GAS LAMP – PENDANT TYPE



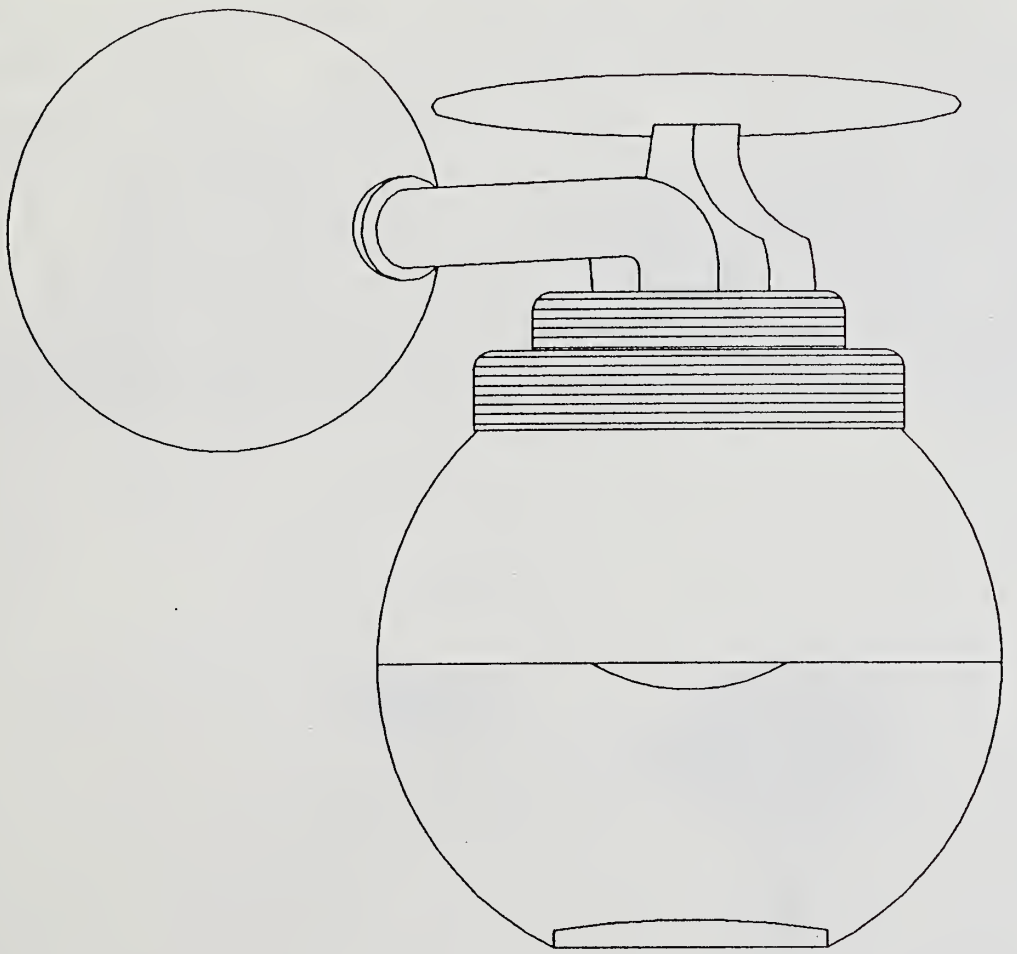
THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

LAMP SHALL BE DESIGNED FOR LIQUID PETROLEUM GAS OPERATION. IT SHALL BE ALL ALUMINUM CONSTRUCTION WITH A POLISHED ALUMINUM FINISH. GLOBE SHALL BE 5 1/2"–INCH MINIMUM DIAMETER, HEAT RESISTANT, OVEN GLASS TYPE WITH FULL FROSTED FINISH. LAMP SHALL BE EQUIPPED WITH PENDANT, HIGH TEMPERATURE CERAMIC BURNER NOSE , AND SHOCK–RESISTANT MANTLE. OVERALL LENGTH SHALL NOT ECEED 25 3/4" INCHES.

~~G-2~~ G2

12-2-88

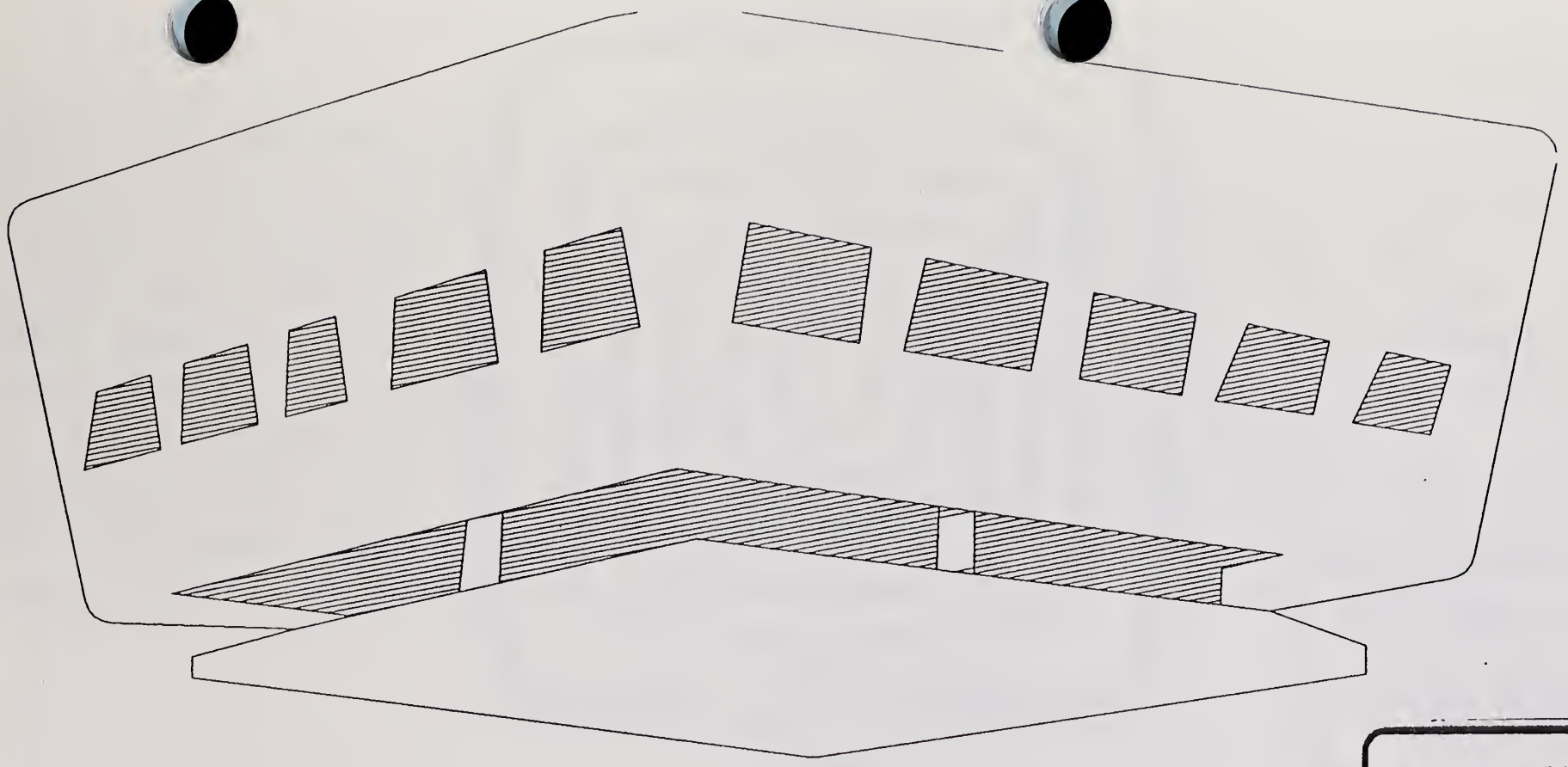
L.P. GAS LAMP – BRACKET 'E



THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

LAMP SHALL BE DESIGNED FOR LIQUID PETROLEUM GAS OPERATION. IT SHALL BE ALL ALUMINUM CONSTRUCTION WITH A POLISHED ALUMINUM FINISH. GLOBE SHALL BE 5 1/2"–INCH MINIMUM DIAMETER, HEAT RESISTANT, OVEN GLASS TYPE WITH FULL FROSTED FINISH. LAMP SHALL BE EQUIPPED WITH HIGH TEMPERATURE CERAMIC BURNER NOSE COMPLETE WITH SHOCK–RESISTANT MANTLE.

~~G-1~~ G1
12–2–88



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LINE VOLTAGE POWERED
IONIZATION TYPE SMOKE DETECTOR

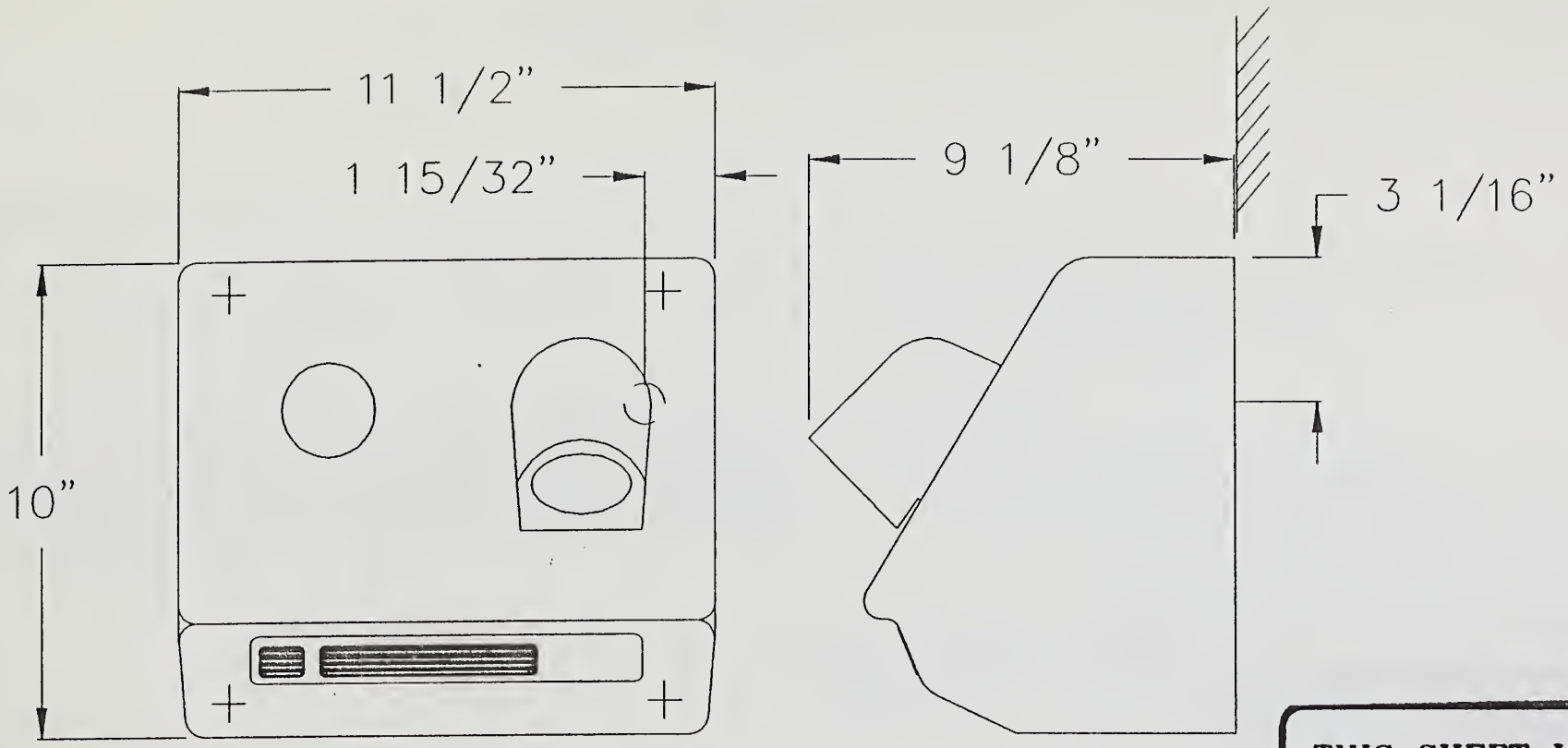
SMOKE DETECTOR SHALL BE IONIZATION TYPE, CEILING MOUNT, WITH SOLID STATE ALARM CIRCUITRY. UNIT SHALL HAVE VISUAL POWER SUPPLY INDICATOR AND 85 DECIBAL ALARM HORN.

DETECTOR SHALL HAVE AT LEAST 40° TO 100°F TEMPERATURE RANGE, 0 TO 95% R.H. HUMIDITY RANGE, AND SHALL FIT 3" OCTAN-GONAL OUTLET BOX.

120 VOLT A.C., UL LISTED

~~ED-1~~ FP1

12-2-88

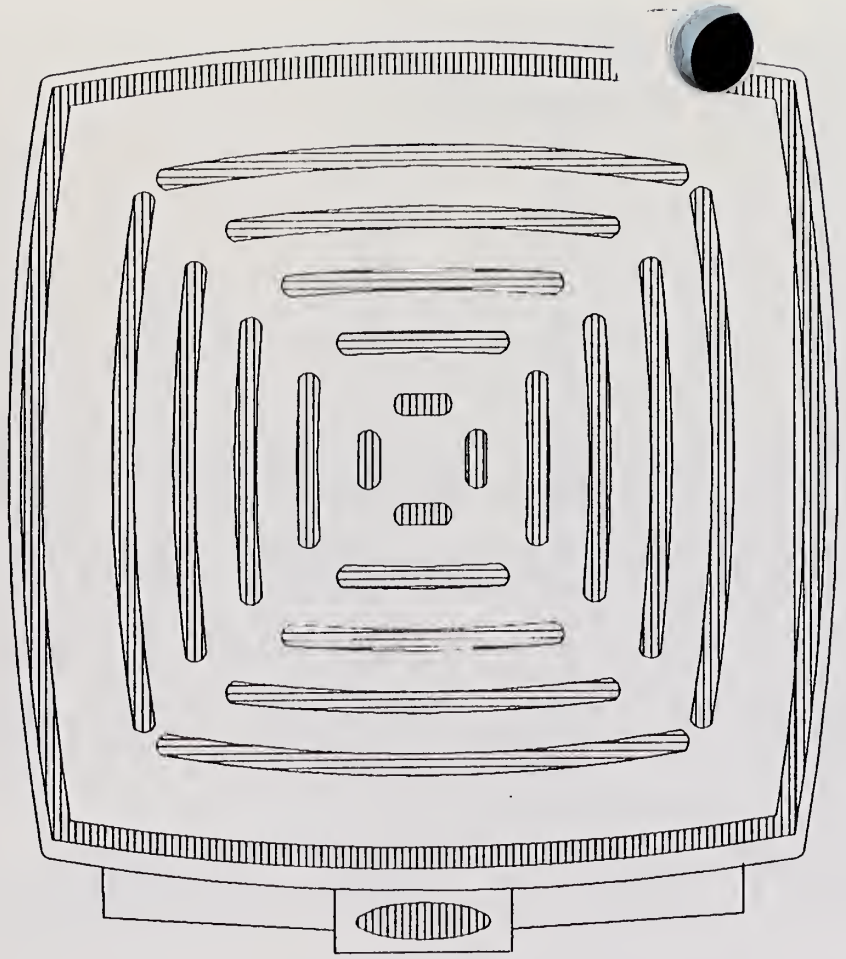


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ELECTRIC HAND DRYER

DRYER SHALL BE EQUIPPED WITH A HEAVY DUTY, 1/10 HP SEALED BALL-BEARING MOTOR, UNIVERSAL TYPE, 7500 RPM AT RATED LOAD, PROTECTED BY A BI-METALLIC CIRCUIT BREAKER CONNECTED DIRECTLY TO THE HEATING ELEMENT, ELECTRICAL RATING 2300 WATTS, 115 VOLTS WITH 30 SECOND TIMED CYCLE. COVER SHALL BE A ONE PEICE GREY IRON CASTING FINISH WITH ACID-RESISTING PORCELAIN ENAMEL, FITTED WITH AN AIR OUTLET OPENING OF METAL VANES 5/6" DEEP, SPACED 1/4" APART, AND COVERED BY A CHROME-PLATED ZINC CAST NOZZLE TO DIRECT THE AIR FLOW. ALL COMPONENTS OF DRYER SHALL BE WARRANTED FOR FIVE YEARS.

~~E-61~~ E 61
12-2-88



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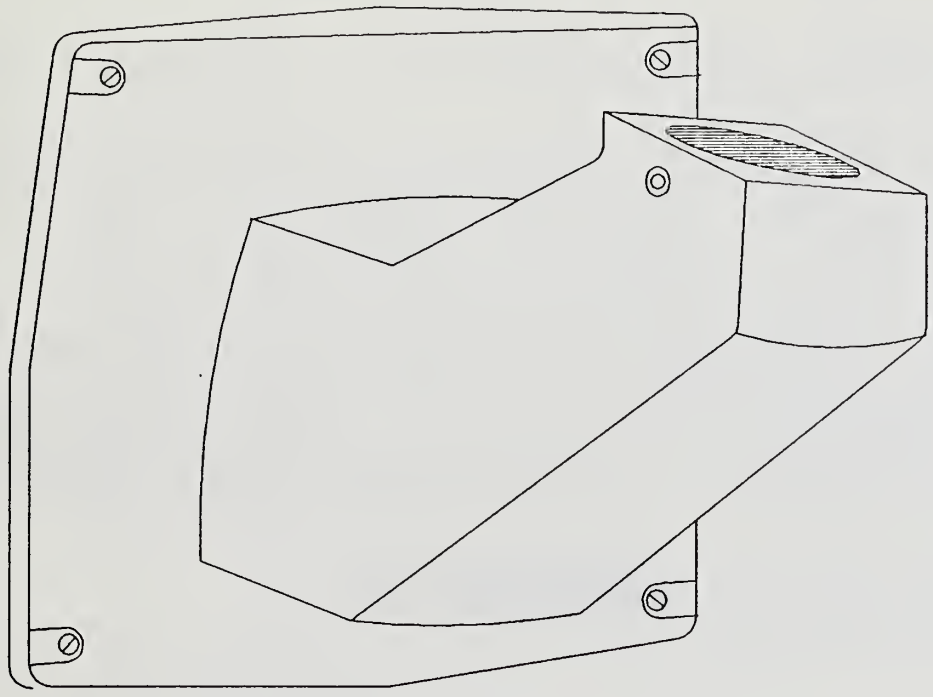
ALARM HORN

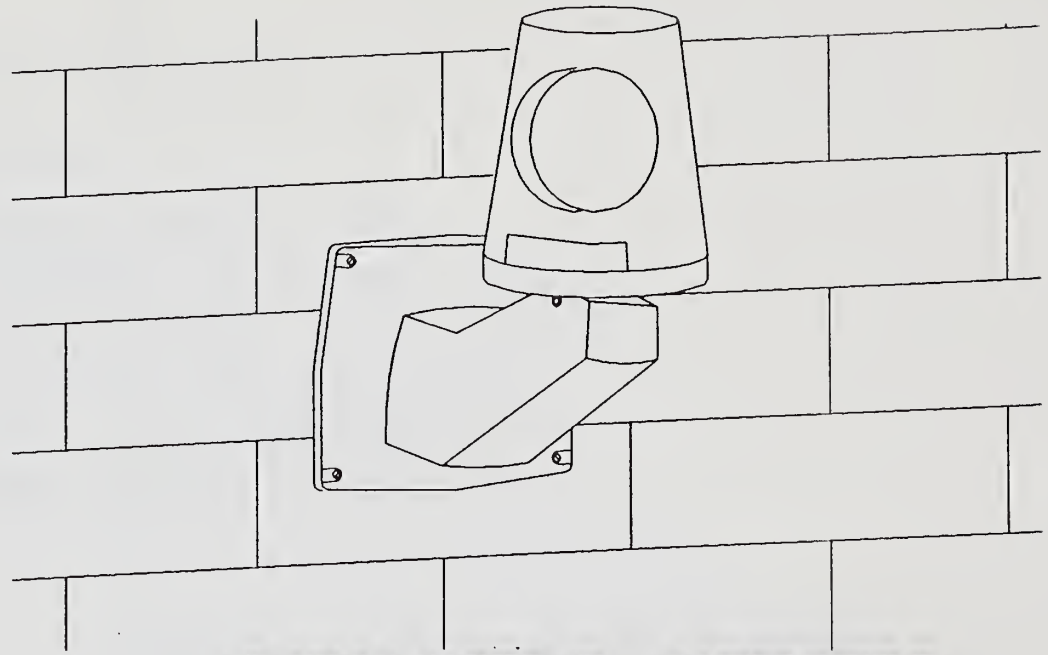
PROVIDE WEATHERPROOF, TAMPERPROOF ALARM HORN NEMA 4 CONSTRUCTION. 3.5 WATTS MAXIMUM AT 24 D.C. AS SHOWN ON DRAWINGS. 100 DECIBEL OUTPUT AT A FREQUENCY OF 400 Hz., AT A DISTANCE OF 10 FEET. SURFACE OR CONDUIT MOUNT. 3/4" NPT DRILLED AND TAPPED. OVERALL DIMENSIONS SHALL BE APPROXIMATELY 4 7/8" SQUARE X 2 5/8" DEEP.

USE EDWARDS CATALOG #877-61 OR APPROVED EQUAL.

~~E-55~~ E55

12-2-88





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REVOLVING ALARM LIGHT

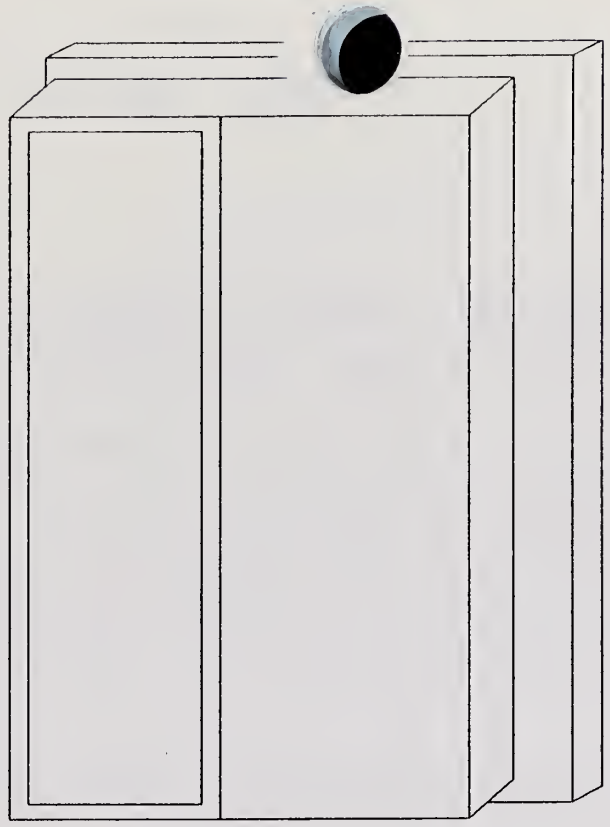
PROVIDE A MOTORIZED REVOLVING ALARM LIGHT WITH A PARABOLIC REFLECTOR, 25 WATT LIGHT, HEAT RESISTANT POLYMER RED LENS, 1/2" CONDUIT MOUNT, 360° REVOLUTION OF LIGHT REFLECTOR. SUPPLY WITH CAST ALUMINUM, GREY HAMMERTONE WALL MOUNT BRACKET.

VOLTAGE 24VDC

MAXIMUM WATTS 50

~~E-50~~ E50

12-2-88



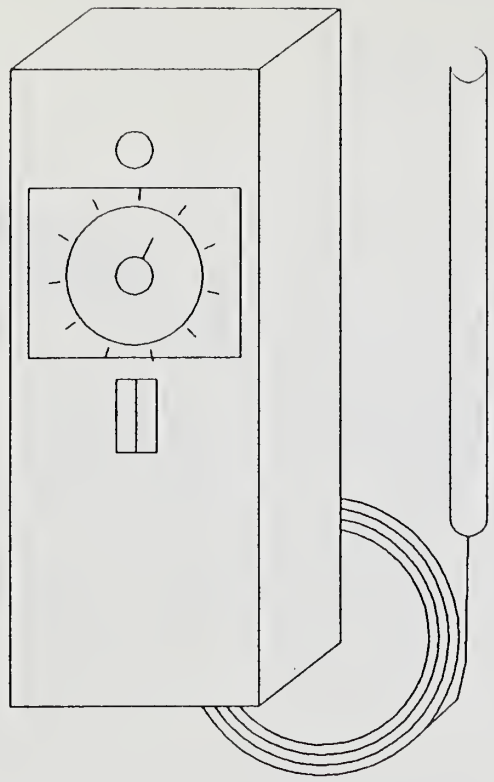
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HUMIDISTAT

PROVIDE HUMIDISTAT WITH KNOB FROM 10% TO 90% RH WITH APPROXIMATELY 4% DIIFERENTIAL WITH SINGLE POLE DOUBLE THROW CONTACTS. CONTACTS RATED 6.0A MINIMUM AT 120VAC, 36.0 LOCKED ROTOR AMPS MINIMUM. UNIT SHALL FIT STANDARD 2" X 4" OUTLET BOX. SENSING ELEMENT HUMAN HAIR. NEMA 1 ENCLOSURE PENN-BASO CATALOG W42AA-1 OR EQUAL.

~~E-49~~ E 49

12-2-88



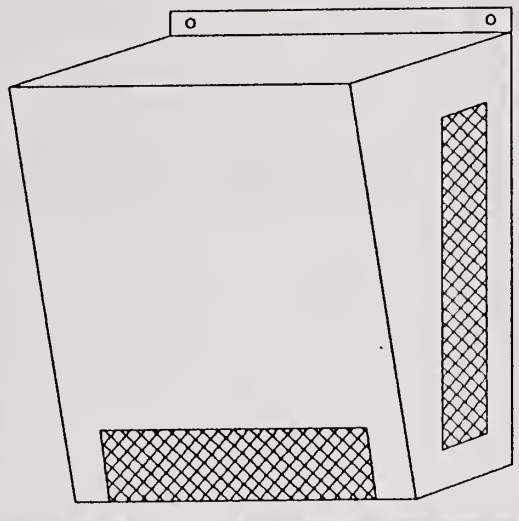
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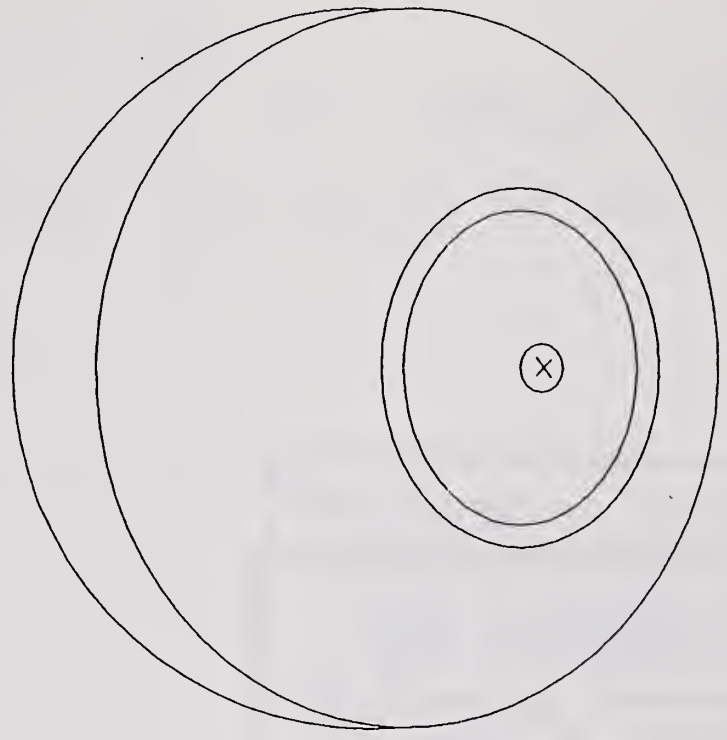
CAPILLARY BULB THERMOSTAT

PROVIDE THERMOSTAT WITH KNOB CALIBRATED IN °F FOR RANGE SHOWN ON DRAWINGS WITH APPROXIMATELY A 3–10° ADJUSTMENT DIIFERENTIAL. PROVIDE SINGLE POLE DOUBLE THROW CONTACTS RATED 8.0 A FLA, 48.0 A LRA AT 120VAC. PROVIDE 5' LENGTH CAPILLARY BULB OF COPPER. NEMA 1 ENCLOSURE WITH 1/2" CONDUIT KNOCK–OUTS. PROVIDE MOUNTING CLAMP FOR CAPILLARY BULB. HONEYWELL T675 A SERIES OR APPROVEED EQUAL.

~~E–48~~ E48
12–2–88

ALARM BELL FOR OUTDOORS

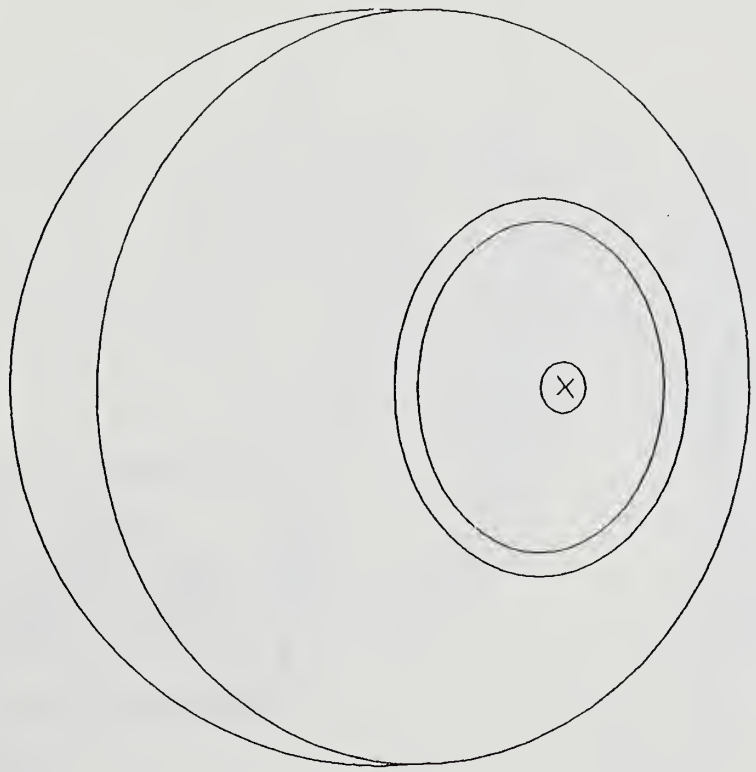




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PROVIDE ALARM BELL, VIBRATING TYPE. MOUNTED IN YARD HOOD TO PROTECT AGAINST TAMPERING AND PILFERAGE. NOMINAL POWER INPUT 3.5 VOLTAMPS. VOLTAGE, CURRENT AND DIMENSIONS AS DESCRIBED IN DRAWINGS. OUTPUT LEVEL 92–98 dB AT 10 FEET.

E–43 E43
12–2–88



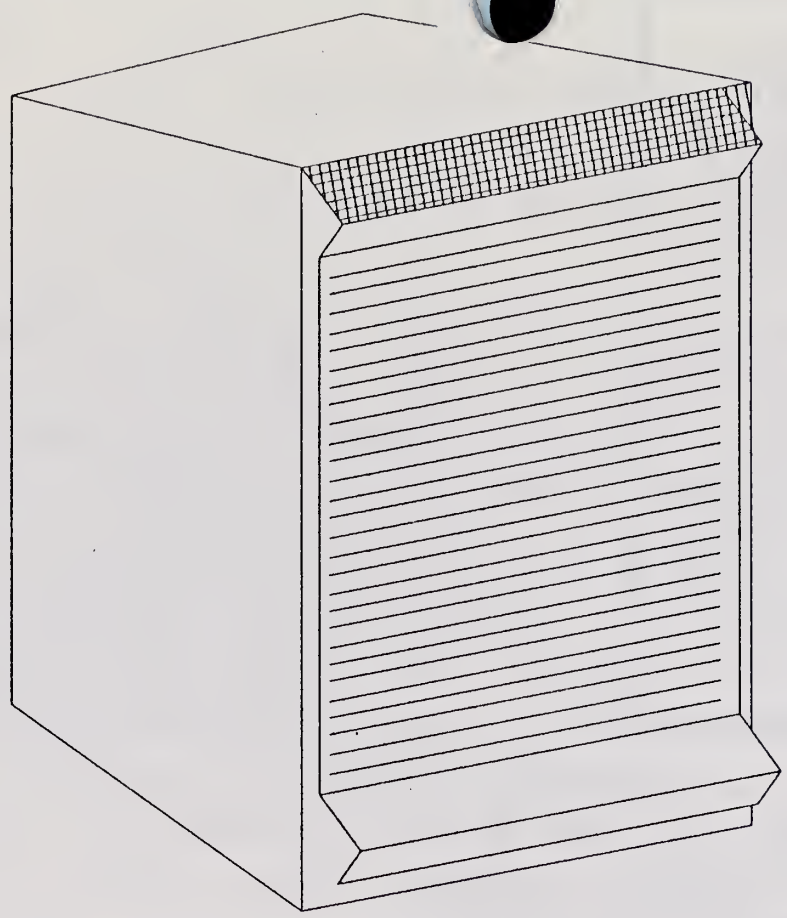
THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

ALARM BELL

PROVIDE ALARM BELL, VIBRATING TYPE. OUTPUT LEVEL 92–98 dB AT 10 FEET. NOMINAL POWER INPUT 3.5 VOLTAMPS. VOLTAGE, AND DIMENSIONS AS DESCRIBED IN DRAWINGS.

~~E-42~~ E42

12-2-8



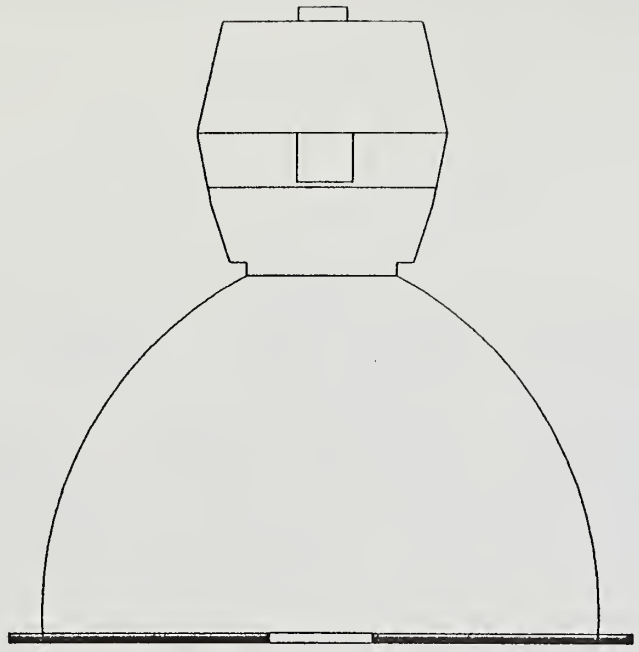
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DEHUMIDIFIER

REFRIGERATION TYPE DEHUMIDIFIER WITH HUMIDISTAT, DRAIN HOSE, 14 PINT PER DAY WATER REMOVAL CAPACITY. UNIT POWER 120 VAC. 60 Hz, 250 WATTS MAXIMUM POWER INPUT.

~~E-39~~ E39

12-2-88



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MEDIUM BAY METAL HALIDE LUMINAIRE

METAL HALIDE FIXTURE WITH INTEGRAL HIGH POWER FACTOR BALLAST WITH OPTICAL CONTROL PRISMATIC GLASS REFLECTOR WITH SELF INDUCED CHIMNEY CLEANING ACTION. PROVIDE WITH MINIMUM COEFFICIENT OF UTILIZATION USING ZONAL CAVITY METHOD OF FLOOR 20%, CEILING 50%, WALL 50%, RCR OF 4, CU. = 0.68 MINIMUM. VOLTAGE AS SHOWN ON DRAWINGS. FURNISH WITH 250W TUNGSTEN HALOGEN EMERGENCY TRANS-FER SYSTEM TO TRANSFER LIGHT SOURCE FROM MAIN LAMP TO AUXILIARY LAMP DURING MOMENTARY POWER OUTAGES. LAMP TO RETRANSFER WHEN METAL HALIDE LAMP IS REIG-NITED. FURNISH WITH RIGID CONDUIT SWIVEL HANGERS.

LAMP — 1 CLEAR METAL HALIDE
BALLAST — BT-37 400W LAMP
PEAK LEAD AUTO TRANSFORMER

MH-1 *MH1*
12-2-88

COEFFICIENTS OF UTILIZATION – ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER)Pfc = 0.20)

EFFECTIVE CEILING CAVITY REFLECTANCE–PERCENT																
WALL		80			70			50			30			10			0
REFLECTANCE		50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
ROOM CAVITY RATIO (RCR)	0	.91	.90	.88	.89	.88	.86	.85	.83	.83	.81	.80	.80	.77	.77	.76	.75
	1	.83	.80	.78	..81	.79	.76	.77	.75	.73	.74	.73	.71	.71	.70	.69	.67
	2	.75	.71	.68	.73	.70	.66	.70	.67	.64	.67	.65	.63	.66	.63	.61	.59
	3	.67	.62	.59	.66	.61	.58	.66	.60	.56	.61	.58	.56	.59	.56	.54	.52
	4	.60	.55	.51	.59	.54	.50	.57	.53	.49	.55	.51	.49	.53	.50	.47	.46
	5	.53	.48	.44	.52	.47	.43	.51	.46	.42	.49	.45	.42	.48	.44	.41	.40
	6	.47	.41	.37	.46	.41	.37	.45	.40	.37	.44	.40	.37	.43	.39	.36	.35
	7	.41	.36	.32	.41	.36	.32	.40	.35	.32	.39	.35	.32	.38	.34	.31	.30
	8	.36	.31	.28	.36	.31	.28	.35	.31	.28	.34	.30	.28	.33	.30	.27	.26
	9	.32	.27	.25	.31	.27	.25	.31	.27	.25	.30	.27	.24	.29	.26	.24	.23
	10	.28	.24	.21	.27	.24	.23	.26	.24	.22	.26	.23	.21	.25	.23	.21	.21

MAXIMUM RECOMMENDED SPACING:

1.7 TIMES HEIGHT ABOVE WORKING PLANE

CANDELA AND LUMEN ARE SHOWN FOR 1000 LUMENS AT THE SOURCE. EXPECTED PERFORMANCE VALVES FOR ANY OF THESE ITEMS MAY BE DETERMINED BY MULTIPLYING GIVEN VALUES BY AN APPROPRIATE FACTOR SUCH AS LAMP LUMEN RATING X BALLAST FACTOR X MAINTENANCE FACTOR – 1000 LUMENS.

PER 1000 LAMPS LUMENS

SHIELDING – ANGLE BELOW HORIZONTAL	
ARC TUBE	LAMP SHIELDED AT
GLASS ENVELOPE	ALL ANGLES

SUMMARY DATA			
ZONE	LUMENS	BARE LAMP	LUMINAIRE
90–180	18	2	2
0–90	765	77	98
0–60	672	67	86
0–30	234	23	30
0–180	784	78	100
TOTAL EFFICIENCY		78	

AVERAGE BRIGHTNESS	
VERT ANGLE	FT LAMBERTS
85°	60
80°	78
75°	91
70°	112
65°	138
*TO CONVERT TO CANDELAS/SQ. INCH DIVIDE BY 452	

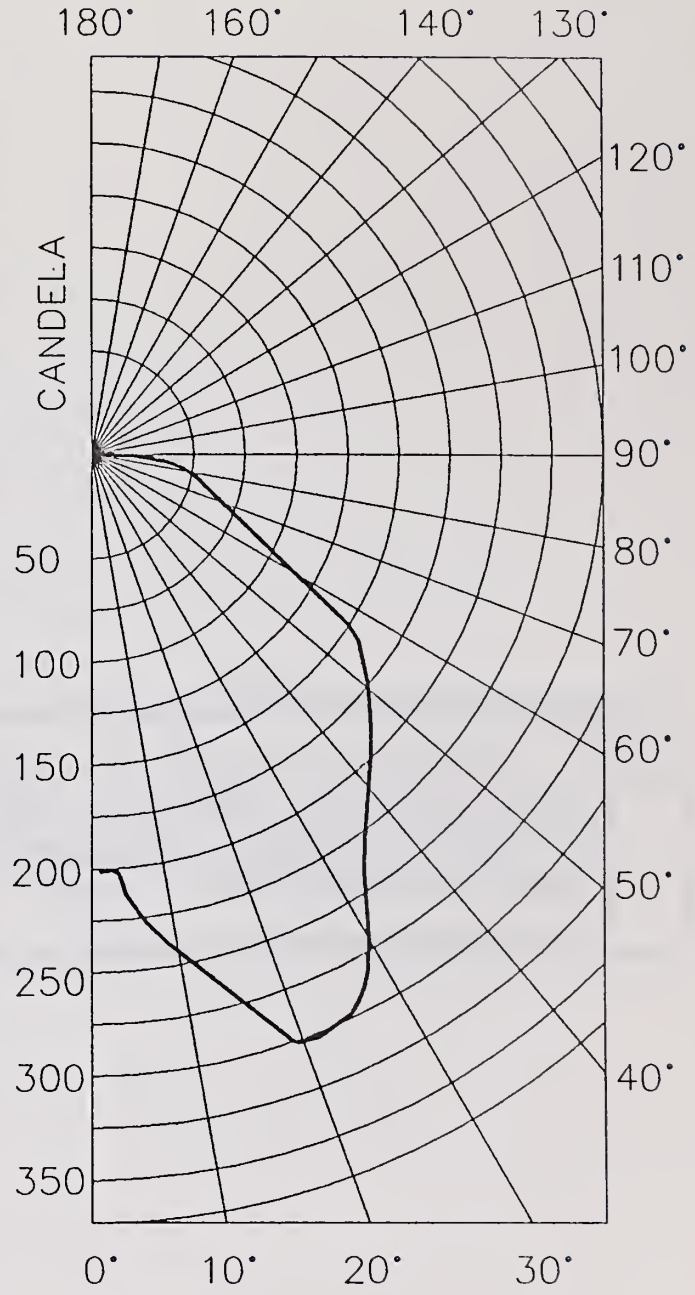
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DISTRIBUTION DATA

VERTICAL ANGLE	CANDELA
180°	1
175°	1
170°	0
165°	0
160°	0
155°	0
150°	0
145°	0
140°	0
135°	0
130°	3
125°	5
120°	5
115°	5
110°	4
105°	4
100°	5
95°	6
90°	8
85°	12
80°	18
75°	27
70°	38
65°	54
60°	84
55°	130
50°	175
45°	205
40°	232
35°	262
30°	284
25°	295
20°	293
15°	272
10°	241
5°	213
0°	201

CANDELA	VERTICAL LUMENS
180°–185°	
175°–180°	0
170°–175°	0
165°–170°	0
160°–165°	0
155°–160°	0
150°–155°	0
145°–150°	0
140°–145°	0
135°–140°	0
130°–135°	0
125°–130°	2
120°–125°	3
115°–120°	2
110°–115°	2
105°–110°	2
100°–105°	2
95°–100°	3
90°– 95°	3
85°– 90°	5
80°– 85°	8
75°– 80°	11
70°– 75°	16
65°– 70°	22
60°– 65°	31
55°– 60°	48
50°– 55°	68
45°– 50°	78
40°– 45°	80
35°– 40°	82
30°– 35°	82
25°– 30°	73
20°– 25°	63
15°– 20°	47
10°– 15°	30
5°– 10°	15
0°– 5°	5

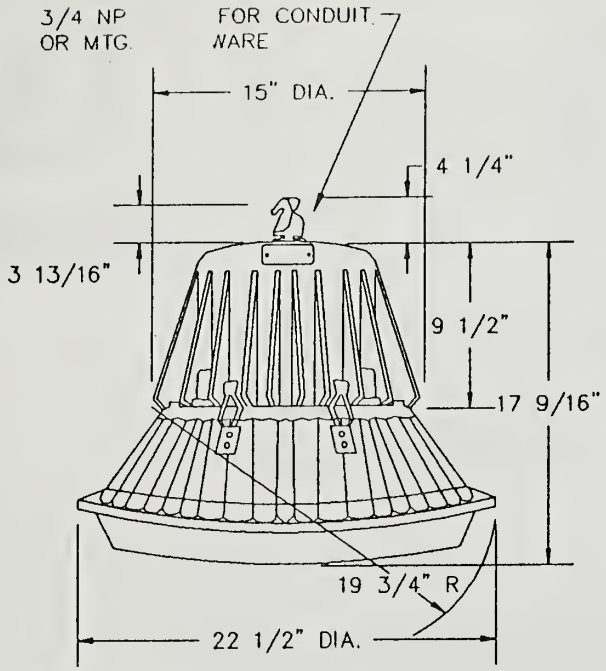
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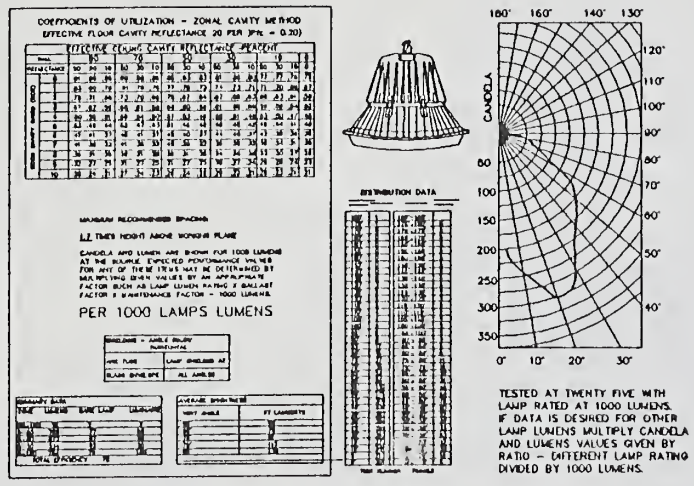


TESTED AT TWENTY FIVE WITH LAMP RATED AT 1000 LUMENS. IF DATA IS DESIRED FOR OTHER LAMP LUMENS MULTIPLY CANDELA AND LUMENS VALUES GIVEN BY RATIO – DIFFERENT LAMP RATING DIVIDED BY 1000 LUMENS.

1/27/17

ELECTRICAL DRAWINGS





TESTED AT TWENTY FIVE WITH LAMP RATED AT 1000 LUMENS. IF DATA IS DESIRED FOR OTHER LAMP LUMENS MULTIPLY CANDELA AND LUMENS VALUES GIVEN BY RATIO - DIFFERENT LAMP RATING DIVIDED BY 1000 LUMENS.

HPS-12 150 WATT LOWMOUNT HIGH PRESSURE SODIUM (WEATHER PROOF)

FIXTURE SHALL HAVE DIECAST ALUMINUM BALLAST HOUSING, SPUN ALUMINUM REFLECTOR, ALZAK PROTECTED INSIDE AND OUT. REFLECTOR SHALL BE GASKETED AND SPUN ONTO REFLECTOR FOR MAXIMUM SEAL RELIABILITY. PROVIDE ENCLOSED ACTIVATED CHARCOAL FILTER.

REFLECTOR SHALL BE UV STABILIZED INJECTION MOLDED ACRYLIC PLASTIC.

PROVIDE LUMINAIRE WITH GASKETS AT ALL POINTS WHERE WATER AND DUST ENTRY IS PROBABLE, ALL EXTERNAL HARDWARE TO BE STAINLESS STEEL.

THE BALLAST SHALL START, AND OPERATE THE LAMP IN AMBIENT TEMPERATURES DOWN TO 20 DEGREES F. THE FIXTURE SHALL OPERATE WITH INPUT VOLTAGE VARIATIONS OF PLUS OR MINUS 10% FROM NOMINAL. AT RATED LINE VOLTAGE THE BALLAST SHALL HAVE A MINIMUM POWER FACTOR OF 95%.

THE COEFFICIENT OF UTILIZATION SHALL BE NOT LESS THAN .67 BASED ON A CEILING REFLECTANCE OF 50%, WALL REFLECTANCE OF 30%, FLOOR REFLECTANCE OF 20%, AND A ROOM CAVITY RATIO OF 2. EACH UNIT SHALL BE COMPLETELY WIRED AND EQUIPPED WITH ALL AUXILIARIES.

PROVIDE A BACKUP 150 WATT SINGLE ENDED BAYONET TYPE QUARTZ LAMP. LAMP WILL
REMAIN ON UNTIL HID LAMP REACHES 60% OF FULL LIGHT OUTPUT.

PROVIDE G.E. MODEL LOW MOUNT 150 OR APPROVED EQUAL.

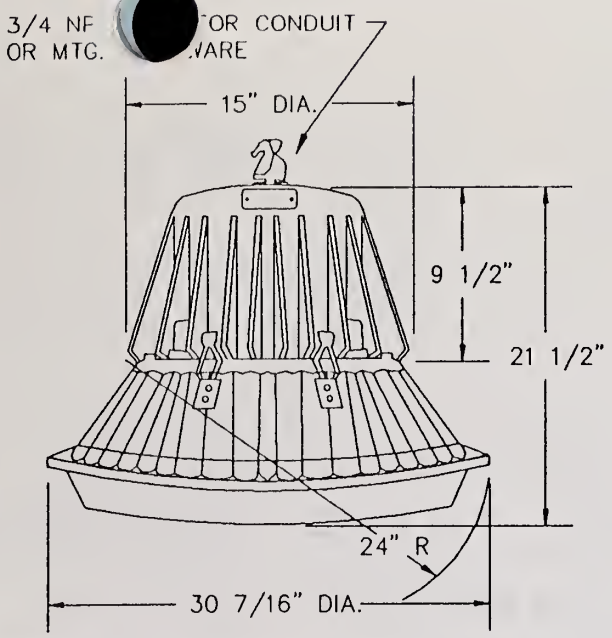
LAMP

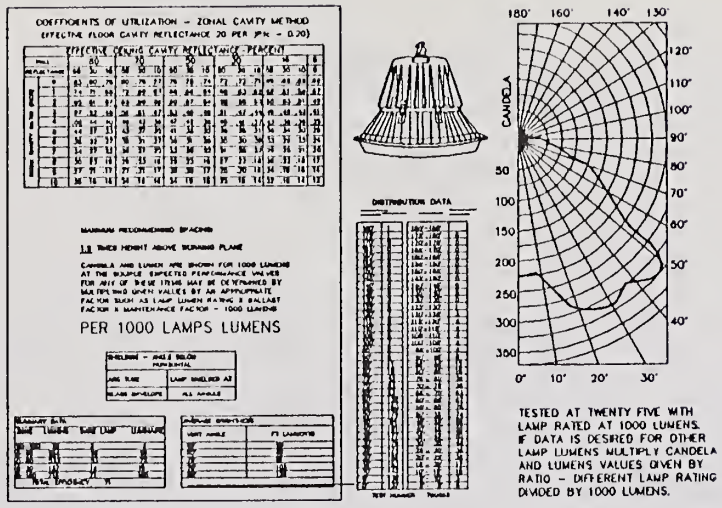
BALLAST

HPS12
~~HPS-12~~
12-10-88

(1) 150 WATT CLEAR HIGH PRESSURE SODIUM
REGULATOR, [illegible]AGE AS SHOWN ON D[illegible]NGS

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TESTED AT TWENTY FIVE WITH LAMP RATED AT 1000 LUMENS. IF DATA IS DESIRED FOR OTHER LAMP LUMENS MULTIPLY CANDELA AND LUMENS VALUES GIVEN BY RATIO - DIFFERENT LAMP RATING DIVIDED BY 1000 LUMENS.

HPS-13 400 WATT LOWMOUNT HIGH PRESSURE SODIUM (WEATHER PROOF)

FIXTURE SHALL HAVE DIECAST ALUMINUM BALLAST HOUSING, SPUN ALUMINUM REFLECTOR, ALZAK PROTECTED INSIDE AND OUT. REFLECTOR SHALL BE GASKETED AND SPUN ONTO REFLECTOR FOR MAXIMUM SEAL RELIABILITY. PROVIDE ENCLOSED ACTIVATED CHARCOAL FILTER.

REFLECTOR SHALL BE UV STABILIZED INJECTION MOLDED ACRYLIC PLASTIC.

PROVIDE LUMINAIRE WITH GASKETS AT ALL POINTS WHERE WATER AND DUST ENTRY IS PROBABLE, ALL EXTERNAL HARDWARE TO BE STAINLESS STEEL.

THE BALLAST SHALL START, AND OPERATE THE LAMP IN AMBIENT TEMPERATURES DOWN TO 20 DEGREES F. THE FIXTURE SHALL OPERATE WITH INPUT VOLTAGE VARIATIONS OF PLUS OR MINUS 10% FROM NOMINAL. AT RATED LINE VOLTAGE THE BALLAST SHALL HAVE A MINIMUM POWER FACTOR OF 95%.

THE COEFFICIENT OF UTILIZATION SHALL BE NOT LESS THAN .57 BASED ON A CEILING REFLECTANCE OF 50%, WALL REFLECTANCE OF 30%, FLOOR REFLECTANCE OF 20%, AND A ROOM CAVITY RATIO OF 2. EACH UNIT SHALL BE COMPLETELY WIRED AND EQUIPPED WITH ALL AUXILIARIES.

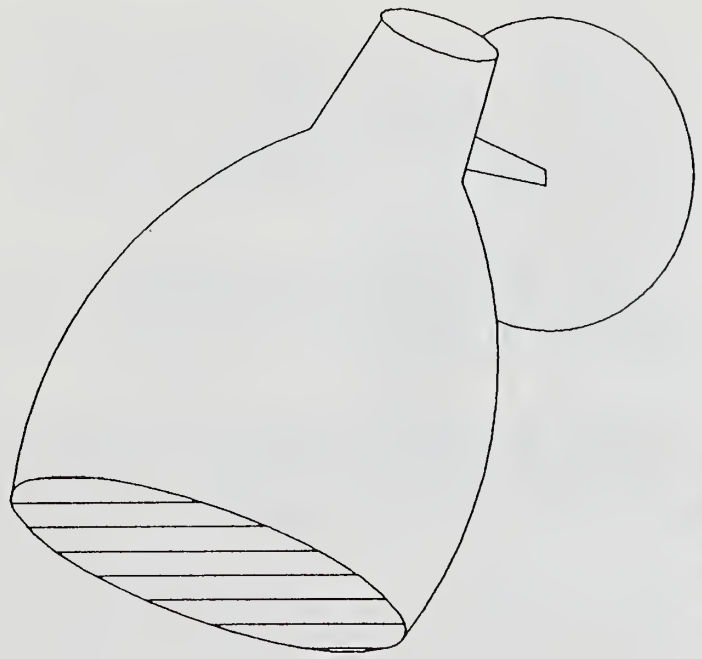
PROVIDE A BACKUP 250 WATT SINGLE ENDED BAYONET TYPE QUARTZ LAMP. LAMP WILL
REMAIN ON UNTIL HID LAMP REACHES 60% OF FULL LIGHT OUTPUT.

PROVIDE G.E. MODEL LOW MOUNT 400 OR APPROVED EQUAL.

LAMP		(1) 400 WATT CLEAR HIGH PRESSURE SODIUM
BALLAST	~~HPS-13~~ HPS13 12-10-88	REGULATOR, VOLTAGE AS SHOWN ON DRAWINGS

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WALL SWIV. FIXTURE
DTEDXT



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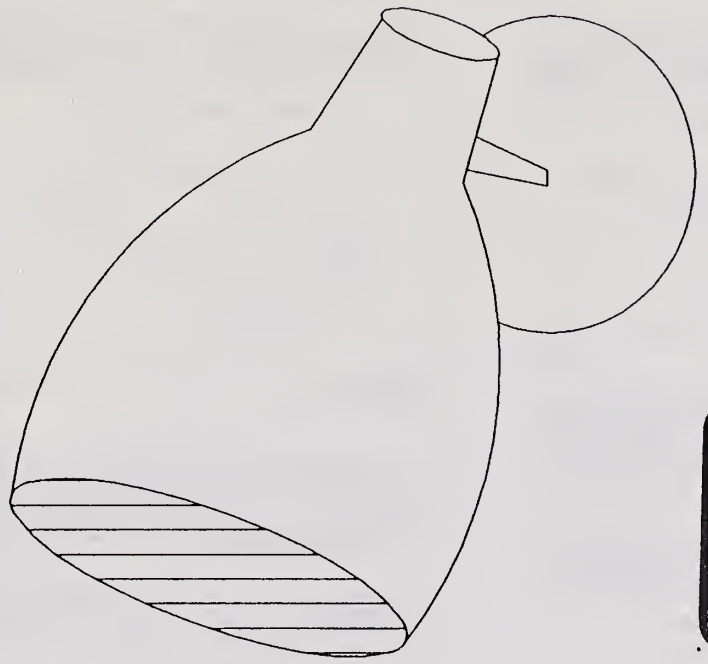
FIXTURE SAHLL BE SOLID ALUMINUM. UNIT SHALL BE SUITABLE FOR 3 1/2" OR 4" OUTLET BOX MOUNTING. EQUIPPED WITH ON-OFF SWITCH. PORCELAIN SOCKET. MINIMUM DIAMETER OF SHADE SHALL BE 4 3/4", MINIMUM HEIGHT 7 3/4". FINISHED IN NATURAL ALUMINUM. ROTATTION 350° MINIMUM AND ANGLE ADJUSTMENT 90° MINIMUM. FIXTURE SHALL BEAR THE UL LABEL.

I-12 I12

1 - 75W

LAMP
12-2-88

WALL SWIV. FIXTURE
DTEDXT



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FIXTURE SAHLL BE SOLID ALUMINUM. UNIT SHALL BE SUITABLE FOR 3 1/2" OR 4" OUTLET BOX MOUNTING. EQUIPPED WITH ON-OFF SWITCH. PORCELAIN SOCKET. MINIMUM DIAMETER OF SHADE SHALL BE 4 3/4", MINIMUM HEIGHT 7 3/4". FINISHED IN NATURAL ALUMINUM. ROTATTION 350° MINIMUM AND ANGLE ADJUSTMENT 90° MINIMUM. FIXTURE SHALL BEAR THE UL LABEL.

I 27
~~I 12~~

1 - 75W

LAMP
12-2-88

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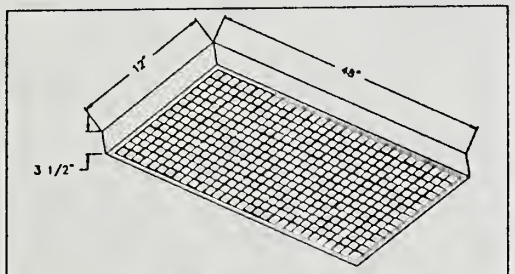


2-TUBE FLUORESCENT STRIP LUMINAIRE

LUMINAIRE SHALL BE COMMERCIAL TYPE WITH 20 GAUGE DIE-FORMED CHANNEL U.L. APPROVED FOR SURFACE MOUNTING. OVERALL DIMENSIONS SHALL BE APPROXIMATELY 4 1/2" X 4" X 48". UNITS SHALL HAVE CONCEALED WIRING AND BALLASTS, KNOCK-OUTS ON THE SIDES AND ON THE ENDS FOR CENTRAL FEED CONTINUOUS WIRING.

F-12

LAMP	2-4-FOOT-F40 T12 CW
BALLAST	RAPID START



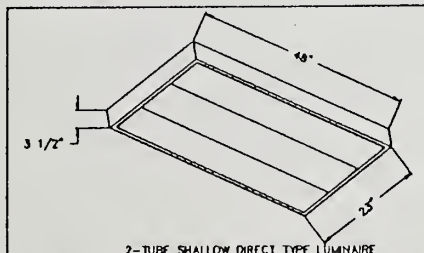
2-TUBE SHALLOW DIRECT TYPE LUMINAIRE

THE LUMINAIRE SHALL HAVE AN AVERAGE BRIGHTNESS IN THE 55°-85° ZONE FROM NADIR NOT IN EXCESS OF 600 FOOT LAMBERTS CROSSWISE OR 600 FOOT LAMBERTS ENDWISE. THE COEFFICIENT OF UTILIZATION SHALL BE NO LESS THAN .38 BASED UPON A CEILING REFLECTANCE OF 50%, A WALL REFLECTANCE OF 30%, A FLOOR REFLECTANCE OF 20%, AND A ROOM CAVITY RATIO OF 5.

THE LUMINAIRE SHALL BE UL APPROVED FOR CEILING MOUNTING WITH MINIMUM STRAPS, END TO END, SIDE BY SIDE, OR PATTERN INSTALLATION USING MINIMUM SPACING FOR CEILING INSTALLATION. THE LENS SHALL BE AN EXTRUDED, CLEAR ACRYLIC PRISMATIC PLASTIC. BACKPLATE OF THE BODY SHALL BE RECESSED 1/8 INCH. STEEL WIRING COVER SHALL CONCEAL ALL WIRING AND BALLASTS AND PROVIDE COVER FOR CENTRAL FEED INTO THE FIXTURE. KNOCKOUTS SHALL BE LOCATED IN THE ENDS AND ON THE SIDES. ENCLOSURES SHALL BE MOUNTED IN METAL FRAMES EQUIPPED WITH SEPARABLE HINGES AND SPRING-ACTUATED TRIGGER LATCHES. ALL ELECTRICAL COMPONENTS SHALL BE REPLACEABLE WITHOUT DISTURBING THE FUXTURE ON THE CEILING.

F-1

LAMP	2-4-FOOT-F40 T12 CW
BALLAST	RAPID START



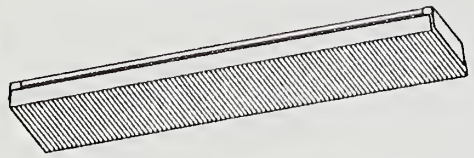
2-TUBE SHALLOW DIRECT TYPE LUMINAIRE

THE LUMINAIRE SHALL HAVE AN AVERAGE BRIGHTNESS IN THE 55°-85° ZONE FROM NADIR NOT IN EXCESS OF 400 FOOT LAMBERTS CROSSWISE OR 400 FOOT LAMBERTS ENDWISE. THE COEFFICIENT OF UTILIZATION SHALL BE NO LESS THAN 0.41 BASED UPON A CEILING REFLECTANCE OF 50%, A WALL REFLECTANCE OF 30%, A FLOOR REFLECTANCE OF 10%, AND A ROOM CAVITY OF 5.

THE LUMINAIRE SHALL BE U.L. APPROVED FOR CEILING MOUNTING WITH MINIMUM STRAPS, END TO END, SIDE BY SIDE, OR PATTERN INSTALLATION USING MINIMUM SPACING FOR CEILING INSTALLATION. THE LENS SHALL BE CLEAR ACRYLIC, PRIMASTIC PLASTIC IN EXTRUDED ALUMINUM. BACKPLATE OF BODY SHALL BE RECESSED 1/8" INCH. STEEL WIRING COVER SHALL CONCEAL ALL WRING AND BALLAST AND PROVIDE COVER FOR CENTRAL FEED INTO THE FIXTURE. KNOCK-OUTS SHALL BE LOCATED IN THE ENDS AND ON THE SIDES. ENCLOSURES SHALL BE MOUNTED IN METAL FRAMES EQUIPPED WITH SEPARATE HINGES AND SPRING-ACTUATED TRIGGER LATCHES ALL ELECTRICAL COMPONENTS SHALL BE REPLACABLE WITHOUT DISTURBING THE FIXTURE ON THE CEILING.

F-4

LAMP	2-4-FOOT-F40 T12 CW
BALLAST	RAPID START

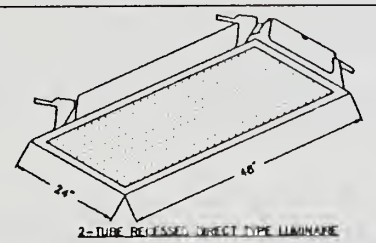


2-TUBE, SHALLOW, DIRECT TYPE LUMINAIRE

LUMINAIRE SHALL VE SUITABLE FOR FLUSH MOUNTING, INDIVIDUALLY OR IN CONTINOUS ROWS. LUMINAIRE CHASSIS SHALL BE ONE PIECE COMPLETE WITH FULL-LENOTH WRIND CHANNEL COVER AND ADEQUATE XNOCKOUTS FOR CONVENIENT INSTALLATION. NOUSING SHALL BE "STEP-BACK" TYPE REDUCING APPARENT DEPTH ENTIRE CHASSIS ASSEMBLY SHALL BE PHOSPHATE PRIMED AND FINISHED IN NON-YELLOWING, CHEMICAL AND HEAT RESISTANT, WHITE BAKED ENAMEL RESULTING IN NOT LESS THAN 85% REFLECTIVITY, LENS SHALL BE "WRAP-AROUND" TYPE HINGING FROM EITHER SIDE AND SHALL BE MADE OF OAMACE RESISTANT, CLEAR, PRISMATIC ACRYLIC. BALLASTS SHALL BE RAPID START THERMALLY PROTECTED CLASS"P" 120-V. LUMINAIRE SHALL BE U.L. LISTED AND MEET THE REQUIREMENTS OF THE 1981 NATIONAL ELECTRICAL CODE.

THE COEFFICIENT OF UTILIZATION SHALL BE NO LESS THAN 0.50 USING THE ZONAL CAVITY METHOD AND CEILING 80%, WALL 50%, FLOOR 20%, RCR 4.0.

LAMP	F-17	2-48 INCH, F40T12CW
BALLAST		RAPID START



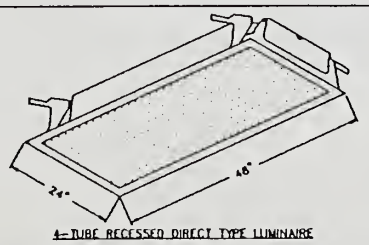
2-TUBE RECESSED DIRECT TYPE LUMINAIRE

THE LUMINAIRE SHALL HAVE AN AVERAGE BRIGHTNESS IN THE 55°-85° ZONE FROM NADIR NOT IN EXCESS OF 500 FOOT LAMBERTS ENDWISE AND 250 FOOT LAMBERTS LENGTHWISE. THE COEFFICIENT OF UTILIZATION SHALL BE NO LESS THAN 0.41 BASED UPON A CEILING REFLECTANCE OF 50%, A WALL REFLECTANCE OF 30%, A FLOOR REFLECTANCE OF 20%, AND A ROOM CAVITY RATIO OF 5.

THE LUMINAIRE SHALL BE U.L. APPROVED FOR CEILING MOUNTING WITH SPRING LOADED SUPPORT ARMS AND ADJUSTABLE BRACKET DESIGNED FOR CEILING SUSPENSION SYSTEM AS SHOWN ON DRAWING. LENS SHALL BE CLEAR, ACRYLIC, PRIMASTIC PLASTIC IN EXTRUDED ALUMINUM FRAME WITH SEPARABLE HINGE AND SPRING ACTUATED TRIGGER LATCHES. STEEL WIRING COVER SHALL CONCEAL ALL WIRING AND BALLASTS. ALL ELECTRICAL COMPONENTS SHALL BE REPLACABLE WITHOUT DISTURBING FIXTURE ON CEILING. KNOCK-OUTS SHALL BE LOCATED ON THE SIDES AND ON THE ENDS FOR CENTRAL FEED CONTINUOUS WIRING.

F-10

LAMP	2-4-FOOT-F40 T12 CW
BALLAST	RAPID START



4-TUBE RECESSED DIRECT TYPE LUMINAIRE

THE LUMINAIRE SHALL HAVE AN AVERAGE BRIGHTNESS IN THE 55°-85° ZONE FROM NADIR NOT IN EXCESS OF 500 FOOT LAMBERTS ENDWISE AND 250 FOOT LAMBERTS LENGTHWISE. THE COEFFICIENT OF UTILIZATION SHALL BE NO LESS THAN 0.41 BASED UPON A CEILING REFLECTANCE OF 50%, A WALL REFLECTANCE OF 30%, A FLOOR REFLECTANCE OF 20%, AND A ROOM CAVITY RATIO OF 5.

THE LUMINAIRE SHALL BE U.L. APPROVED FOR CEILING MOUNTING WITH SPRING LOADED SUPPORT ARMS AND ADJUSTABLE BRACKET DESIGNED FOR CEILING SUSPENSION SYSTEM AS SHOWN ON DRAWING. LENS SHALL BE CLEAR, ACRYLIC, PRIMASTIC PLASTIC IN EXTRUDED ALUMINUM FRAME WITH SEPARABLE HINGE AND SPRING ACTUATED TRIGGER LATCHES. STEEL WIRING COVER SHALL CONCEAL ALL WIRING AND BALLASTS. ALL ELECTRICAL COMPONENTS SHALL BE REPLACABLE WITHOUT DISTURBING FIXTURE ON CEILING. KNOCK-OUTS SHALL BE LOCATED ON THE SIDES AND ON THE ENDS FOR CENTRAL FEED CONTINUOUS WIRING.

F-21

LAMP	4-FOOT-F40 T12 CW
BALLAST	RAPID START



4 TUBE INDUSTRIAL TYPE LUMINAIR

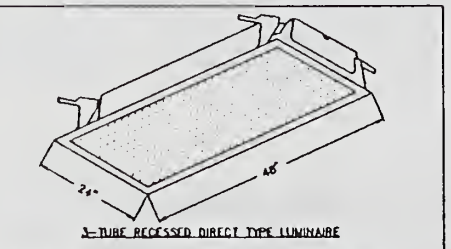
THE LUMINAIRE SHALL BE INDUSTRIAL TYPE LIGHTING FIXTURE FOR T-12, RAPID START, 430 MA, FLOURESCENT LAMPS, FOR INDIVIDUAL OR CONTINUOUS MOUNTING AS SHOWN ON THE PLANS. CHANNEL SHALL BE DIE FORMED STEEL NOT LESS THAN 0.032" THICK AFTER FABRICATION. CHANNEL SHALL BE ARRANGED FOR CHAIN, PIPE, STEM OR MESSENGER CABLE HANGERS. SHIELDING ANGLE SHALL BE 13° BELOW HORIZONTAL ON THE AVERAGE, BUT NOT LESS THAN 11-1/2° FOR ANY INDIVIDUAL UNIT. ALL METAL SHALL BE PRETREATED BY A PROTECTIVE COATING OF ZINC PHOSPHATE, APPLIED IN NOT LESS THAN THREE STAGES. FINISH OF CHANNEL BE BAKED WHITE ENAMEL. EXTERIOR OF REFLECTOR SHALL BE HOT-BONDED WHITE ENAMEL WITH A MEAN REFLECTIVE FACTOR OF 88% MINIMUM. CANDLE POWER AT AN ANGLE OF 55° FROM VERTICAL SHALL BE NOT LESS THAN 55% OF VERTICAL (0°).

COEFFICIENT OF UTILIZATION SHALL BE .41 BASED ON CEILING REFLECTANCE OF 50%, A WALL REFLECTANCE OF 30%, A FLOOR REFLECTANCE OF 20% AND A ROOM CAVITY RATIO OF 5.

EACH UNIT SHALL BE COMPLETELY WIRED AND EQUIPPED WITH ALL AUXILIARIES, CONFORMING TO F.S. W-L-131. BALLASTS SHALL BE HPF, ETL. PROVIDE HANGERS AND MOUNTING ACCESSORIES AS REQUIRED.

FIXTURE SHALL BEAR UL LABEL.

LAMP	F-20	4-4 FOOT-F40 T 12 CW
BALLAST		RAPID START



3-TUBE RECESSED DIRECT TYPE LUMINAIRE

THE LUMINAIRE SHALL HAVE AN AVERAGE BRIGHTNESS IN THE 55°-85° ZONE FROM NADIR NOT IN EXCESS OF 500 FOOT LAMBERTS ENDWISE AND 250 FOOT LAMBERTS LENGTHWISE. THE COEFFICIENT OF UTILIZATION SHALL BE NO LESS THAN 0.41 BASED UPON A CEILING REFLECTANCE OF 50%, A WALL REFLECTANCE OF 30%, A FLOOR REFLECTANCE OF 20%, AND A ROOM CAVITY RATIO OF 5.

THE LUMINAIRE SHALL BE U.L. APPROVED FOR CEILING MOUNTING WITH SPRING LOADED SUPPORT ARMS AND ADJUSTABLE BRACKET DESIGNED FOR CEILING SUSPENSION SYSTEM AS SHOWN ON DRAWING. LENS SHALL BE CLEAR, ACRYLIC, PRIMASTIC PLASTIC IN EXTRUDED ALUMINUM FRAME WITH SEPARABLE HINGE AND SPRING ACTUATED TRIGGER LATCHES. STEEL WIRING COVER SHALL CONCEAL ALL WIRING AND BALLASTS. ALL ELECTRICAL COMPONENTS SHALL BE REPLACABLE WITHOUT DISTURBING FIXTURE ON CEILING. KNOCK-OUTS SHALL BE LOCATED ON THE SIDES AND ON THE ENDS FOR CENTRAL FEED CONTINUOUS WIRING.

F-22

LAMP	3-FOOT-F40 T12 CW
BALLAST	RAPID START

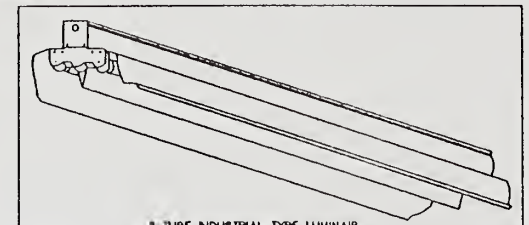


1-TUBE STRIP LUMINAIRE

LUMINAIRE SHALL BE COMMERCIAL TYPE WITH 20 GAUGE DIE-FORMED CHANNEL APPROVED BY U.L. FOR SUFACE MOUNTING. ALL METAL PARTS SHALL BE BONDERIZED AGAINST CORROSION AND FINISHED IN WHITE BAKED ENAMEL. OVERALL DIMENSIONS SHALL BE APPROXIMATELY 3 7/8" X 7" X 48".

EACH UNIT SHALL BE COMPLETELY WIRED AND EQUIPPED WITH ALL AUXILIARIES.

LAMP	F-8	1-4-FOOT-F40 T12 CW
BALLAST		RAPID START



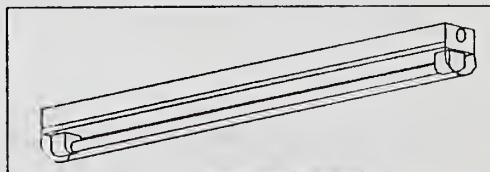
2 TUBE INDUSTRIAL TYPE LUMINAIR

THE LUMINAIRE SHALL BE INDUSTRIAL TYPE LIGHTING FIXTURE FOR T-12, RAPID START, 430 MA, FLOURESCENT LAMPS, FOR INDIVIDUAL OR CONTINUOUS MOUNTING AS SHOWN ON THE PLANS. CHANNEL SHALL BE DIE FORMED STEEL NOT LESS THAN 0.032" THICK AFTER FABRICATION. CHANNEL SHALL BE ARRANGED FOR CHAIN, PIPE, STEM OR MESSENGER CABLE HANGERS. SHIELDING ANGLE SHALL BE 13° BELOW HORIZONTAL ON THE AVERAGE, BUT NOT LESS THAN 11-1/2° FOR ANY INDIVIDUAL UNIT. ALL METAL SHALL BE PRETREATED BY A PROTECTIVE COATING OF ZINC PHOSPHATE, APPLIED IN NOT LESS THAN THREE STAGES. FINISH OF CHANNEL BE BAKED WHITE ENAMEL. EXTERIOR OF REFLECTOR SHALL BE HOT-BONDED WHITE ENAMEL WITH A MEAN REFLECTIVE FACTOR OF 82% MINIMUM. CANDLE POWER AT AN ANGLE OF 55° FROM VENTICAL SHALL BE NOT LESS THAN 55% OF VERTICAL (0°).

EACH UNIT SHALL BE COMPLETELY WIRED AND EQUIPPED WITH ALL AUXILIARIES, CONFORMING TO F.S. W-L-131. BALLASTS SHALL BE HPF, ETL. PROVIDE HANGERS AND MOUNTING ACCESSORIES AS REQUIRED.

FIXTURE SHALL BEAR UL LABEL.

LAMP	F-5	2-4 FOOT-F40 T 12 CW
BALLAST		RAPID START

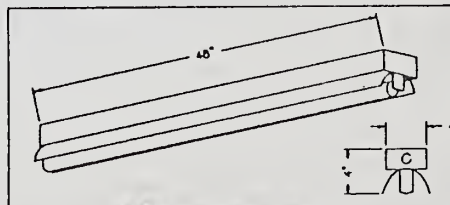


1-TUBE STRIP LUMINAIRE

THE LUMINAIRE SHALL BE COMMERCIAL TYPE WITH 20 GUAGE DIE-FORMED CHANNEL AND REFLECTOR APPPROVED BY U.L. FOR SURFACE MOUNTING. ALL METAL PARTS BONDERIZED AGAINST CORROSION AND FINISHED IN WHITE BAKED ENAMEL. OVERALL DIMENSIONS SHALL BE APPROXMATELY 3 7/8" X 7" X 48" INCLUDING REFLECTOR.

EACH UNIT SHALL BE COMPLETELY WIRED AND EQUIPPED WITH ALL AUXILIARIES. BALLAST SHALL BE HPF, ETL, 430MA.

LAMP	F-7	1-4 FOOT-F40 T 12 CW
BALLAST		RAPID START



1-TUBE STRIP LUMINAIRE REFLECTOR

LUMINAIRE SHALL BE COMMERCIAL TYPE WITH 20 GUAGE SURFACE MOUNT CHANNEL AND REMOVABLE REFLECTOR AND COVER. OVERALL DIMENSIONS SHALL BE APPROXIMATELY 4" X 4" X 48".

UNIT SHALL HAVE CONCEALED WIRING AND BALLAST, KNOCK-OUTS ON THE SIDES AND ON THE ENDS FOR CENTRAL FEED CONTINUOUS WIRING. FIXTURE SHALL BE U.L. APPROVED FOR SURFACE MOUNTING.

LAMP	F-11	1-4 FOOT-F40 T 12 CW
BALLAST		RAPID START

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

DRAWN	M.BRONSON	DATE 8-10-82
DESIGNED		DATE
CHECKED		DATE
APPROVED		DATE

ELECTRICAL FIXTURE CUT SHEET

EXFC 79-1

9
10

EXFC 5009



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1-TUBE STRIP LUMINAIRE

LUMINAIRE SHALL BE COMMERCIAL TYPE WITH 20 GAUGE DIE-FORMED CHANNEL APPROVED BY U.L. FOR SUFACE MOUNTING. ALL METAL PARTS SHALL BE BONDERIZED AGAINST CORROSION AND FINISHED IN WHITE BAKED ENAMEL. OVERALL DIMENSIONS SHALL BE APPROXIMATELY 3 7/8" X 7" X 48".

EACH UNIT SHALL BE COMPLETELY WIRED AND EQUIPPED WITH ALL AUXILIARIES.

LAMP	F-8	1-4-FOOT-F40 T12 CW
BALLAST		RAPID START



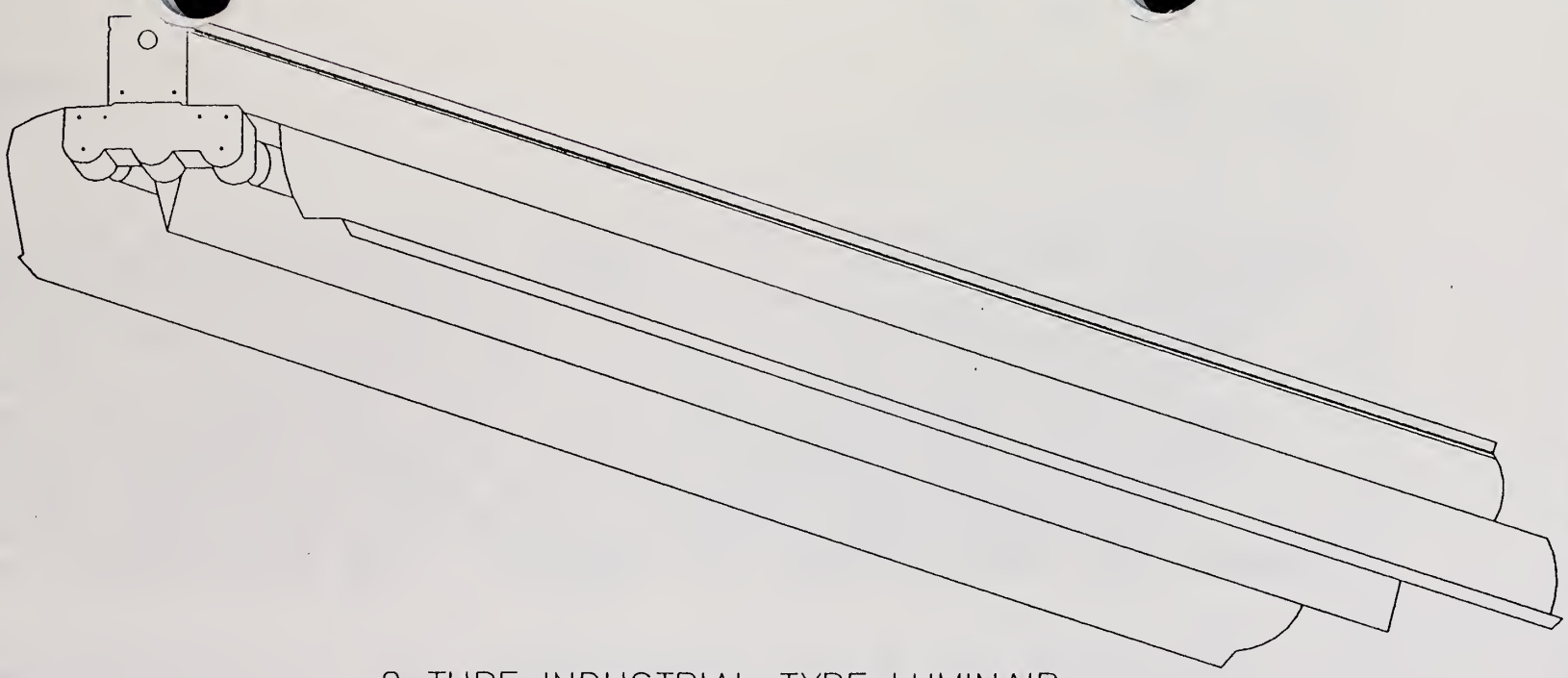
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1-TUBE STRIP LUMINAIRE

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EACH UNIT SHALL BE COMPLETELY WIRED AND EQUIPPED WITH ALL AUXILIARIES. BALLAST SHALL BE HPF, ETL, 430MA.

LAMP	F-7	1-4 FOOT-F40 T 12 CW
BALLAST		RAPID START



2 TUBE INDUSTRIAL TYPE LUMINAIR

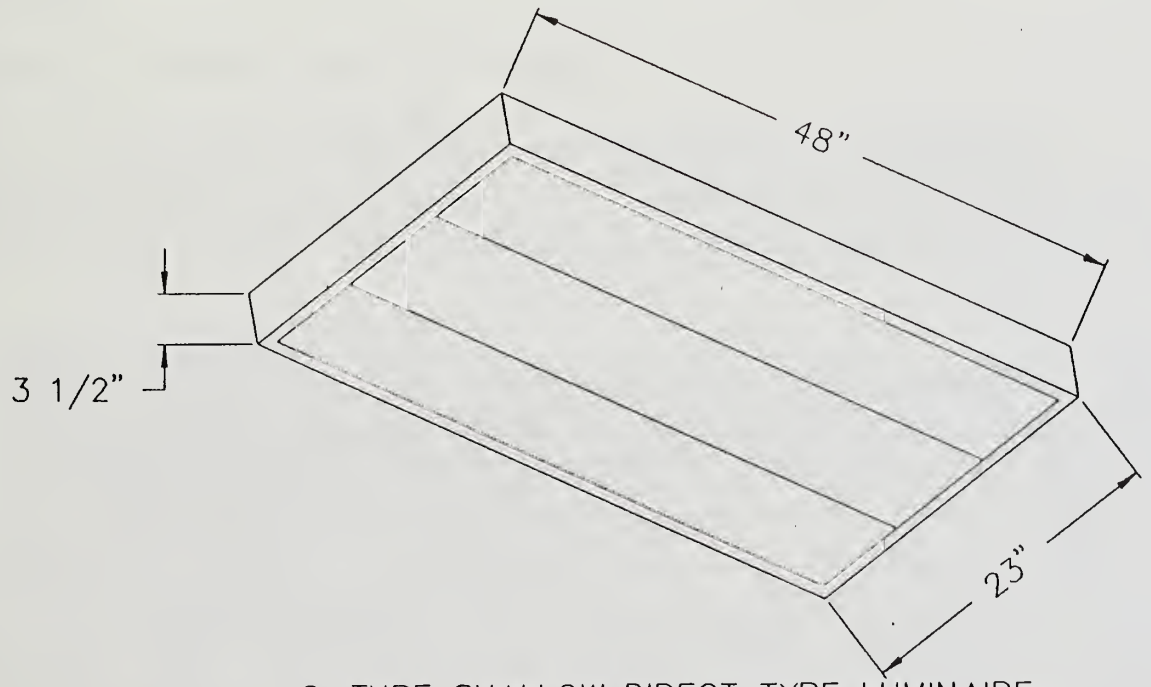
THE LUMINAIRE SHALL BE INDUSTRIAL TYPE LIGHTING FIXTURE FOR T–12, RAPID START, 430 MA, FLOURESCENT LAMPS, FOR INDIVIDUAL OR CONTINUOUS MOUNTING AS SHOWN ON THE PLANS. CHANNEL SHALL BE DIE FORMED STEEL NOT LESS THAN 0.032" THICK AFTER FABRICATION. CHANNEL SHALL BE ARRANGED FOR CHAIN, PIPE, STEM OR MESSENGER CABLE HANGERS. SHIELDING ANGLE SHALL BE 13° BELOW HORIZONTAL ON THE AVERAGE, BUT NOT LESS THAN 11–1/2° FOR ANY INDIVIDUAL UNIT. ALL METAL SHALL BE PRETREATED BY A PROTECTIVE COATING OF ZINC PHOSPHATE, APPLIED IN NOT LESS THAN THREE STAGES. FINISH OF CHANNEL BE BAKED WHITE ENAMEL. EXTERIOR OF REFLECTOR SHALL BE HOT–BONDED WHITE ENAMEL WITH A MEAN REFLECTIVE FACTOR OF 82% MINIMUM. CANDLE POWER AT AN ANGLE OF 55° FROM VERTICAL SHALL BE NOT LESS THAN 55% OF VERTICAL (0°).

EACH UNIT SHALL BE COMPLETELY WIRED AND EQUIPPED WITH ALL AUXILIARIES, CONFORMING TO F.S. W–L–131. BALLASTS SHALL BE HPF, ETL. PROVIDE HANGERS AND MOUNTING ACCESSORIES AS REQUIRED.

FIXTURE SHALL BEAR UL LABEL.

LAMP	F–5	2–4 FOOT–F40 T 12 CW
BALLAST		RAPID START

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2–TUBE SHALLOW DIRECT TYPE LUMINAIRE

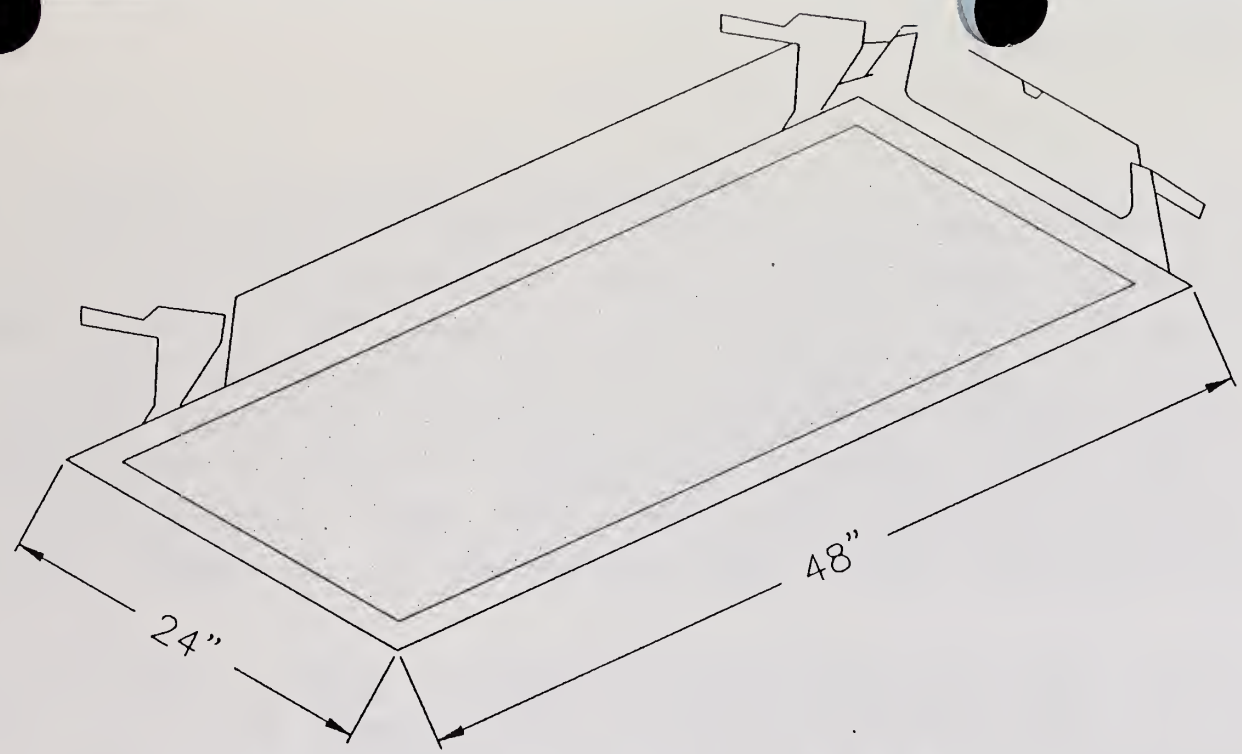
THE LUMINAIRE SHALL HAVE AN AVERAGE BRIGHTNESS IN THE 55°–85° ZONE FROM NADIR NOT IN EXCESS OF 400 FOOT LAMBERTS CROSSWISE OR 400 FOOT LAMBERTS ENDWISE. THE COEFFICIENT OF UTILIZATION SHALL BE NO LESS THAN 0.41 BASED UPON A CEILNG REFLECTANCE OF 50%, A WALL REFLECTANCE OF 30%, A FLOOR REFLECTANCE OF 10%, AND A ROOM CAVITY OF 5.

THE LUMINAIRE SHALL BE U.L. APPROVED FOR CEILING MOUNTING WITH MINIMUM STRAPS, END TO END, SIDE BY SIDE, OR PATTERN INSTALLATION USING MINIMUM SPACING FOR CEILING INSTALLATION. THE LENS SHALL BE CLEAR ACRYLIC, PRIMASTIC PLASTIC IN EXTRUDED ALUMINUM. BACKPLATE OF BODY SHALL BE RECESSED 1/8" INCH. STEEL WIRING COVER SHALL CONCEAL ALL WIRING AND BALLAST AND PROVIDE COVER FOR CENTRAL FEED INTO THE FIXTURE. KNOCK–OUTS SHALL BE LOCATED IN THE ENDS AND ON THE SIDES. ENCLOSURES SHALL BE MOUNTED IN METAL FRAMES EQUIPPED WITH SEPARATE HINGES AND SPRING–ACTUATED TRIGGER LATCHES. ALL ELECTRICAL COMPONENTS SHALL BE REPLACABLE WITHOUT DISTURBING THE FIXTURE ON THE CEILING.

F–4

LAMP	2–4–FOOT–F40 T12 CW
BALLAST	RAPID START

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3-TUBE RECESSED DIRECT TYPE LUMINAIRE

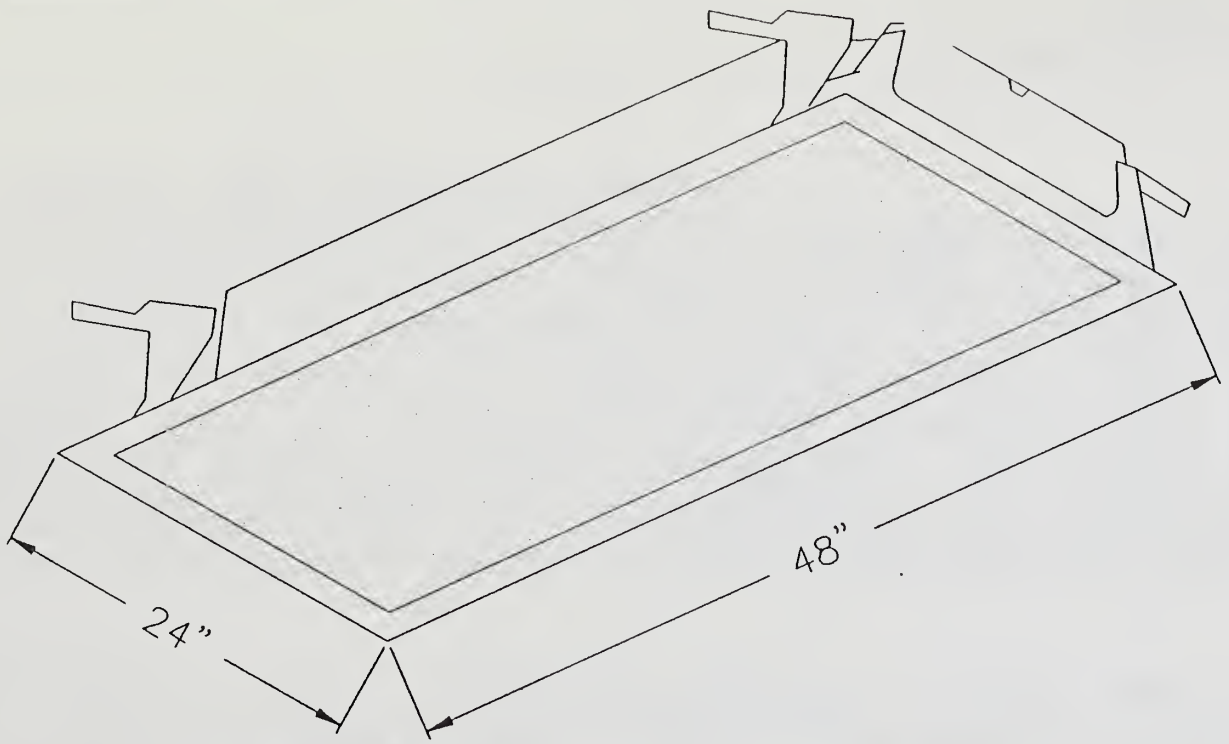
THE LUMINAIRE SHALL HAVE AN AVERAGE BRIGHTNESS IN THE 55°-85° ZONE FROM NADIR NOT IN EXCESS OF 500 FOOT LAMBERTS ENDWISE AND 250 FOOT LAMBERTS LENGTHWISE. THE COEFFICIENT OF UTILIZATION SHALL BE NO LESS THAN 0.41 BASED UPON A CEILNG REFLECTANCE OF 50%, A WALL REFLECTANCE OF 30%, A FLOOR REFLECTANCE OF 20%, AND A ROOM CAVITY RATIO OF 5.

THE LUMINAIRE SHALL BE U.L. APPROVED FOR CEILING MOUNTING WITH SPRING LOADED SUPPORT ARMS AND ADJUSTABLE BRACKET DESIGNED FOR CEILING SUSPENSION SYSTEM AS SHOWN ON DRAWING. LENS SHALL BE CLEAR, ACRYLIC, PRIMASTIC PLASTIC IN EXTRUDED ALUMINUM FRAME WITH SEPARABLE HINGE AND SPRING ACTUATED TRIGGER LATCHES. STEEL WIRING COVER SHALL CONCEAL ALL WIRING AND BALLASTS. ALL ELECTRICAL COMPONENTS SHALL BE REPLACABLE WITHOUT DISTURBING FIXTURE ON CEILING. KNOCK-OUTS SHALL BE LOCATED ON THE SIDES AND ON THE ENDS FOR CENTRAL FEED CONTINUOUS WIRING.

F-22

LAMP	3-FOOT-F40 T12 CW
BALLAST	RAPID START

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4–TUBE RECESSED DIRECT TYPE LUMINAIRE

THE LUMINAIRE SHALL HAVE AN AVERAGE BRIGHTNESS IN THE 55°–85° ZONE FROM NADIR NOT IN EXCESS OF 500 FOOT LAMBERTS ENDWISE AND 250 FOOT LAMBERTS LENGTHWISE. THE COEFFICIENT OF UTILIZATION SHALL BE NO LESS THAN 0.41 BASED UPON A CEILNG REFLECTANCE OF 50%, A WALL REFLECTANCE OF 30%, A FLOOR REFLECTANCE OF 20%, AND A ROOM CAVITY RATIO OF 5.

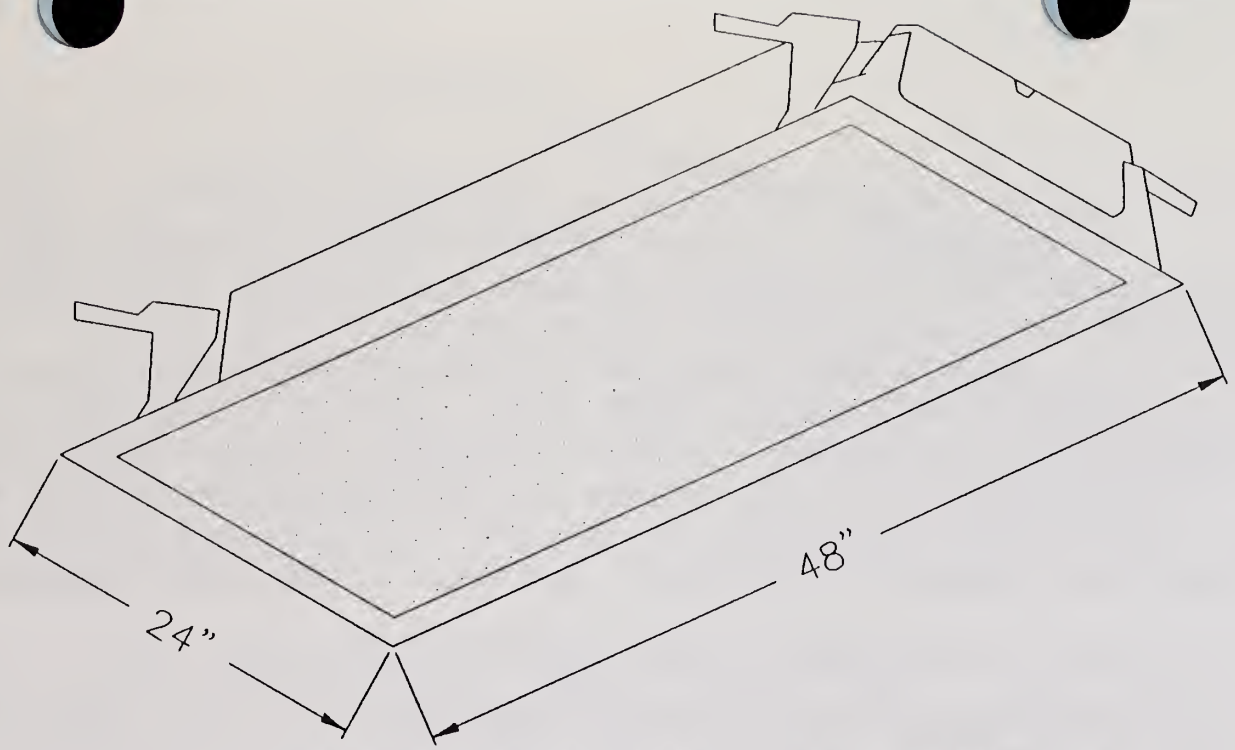
THE LUMINAIRE SHALL BE U.L. APPROVED FOR CEILING MOUNTING WITH SPRING LOADED SUPPORT ARMS AND ADJUSTABLE BRACKET DESIGNED FOR CEILING SUSPENSION SYSTEM AS SHOWN ON DRAWING. LENS SHALL BE CLEAR, ACRYLIC, PRIMASTIC PLASTIC IN EXTRUDED ALUMINUM FRAME WITH SEPARABLE HINGE AND SPRING ACTUATED TRIGGER LATCHES. STEEL WIRING COVER SHALL CONCEAL ALL WIRING AND BALLASTS. ALL ELECTRICAL COMPONENTS SHALL BE REPLACABLE WITHOUT DISTURBING FIXTURE ON CEILING. KNOCK–OUTS SHALL BE LOCATED ON THE SIDES AND ON THE ENDS FOR CENTRAL FEED CONTINUOUS WIRING.

F–21

LAMP
BALLAS -

4–FOOT–F40 T12 CW
RAPID START

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2–TUBE RECESSED DIRECT TYPE LUMINAIRE

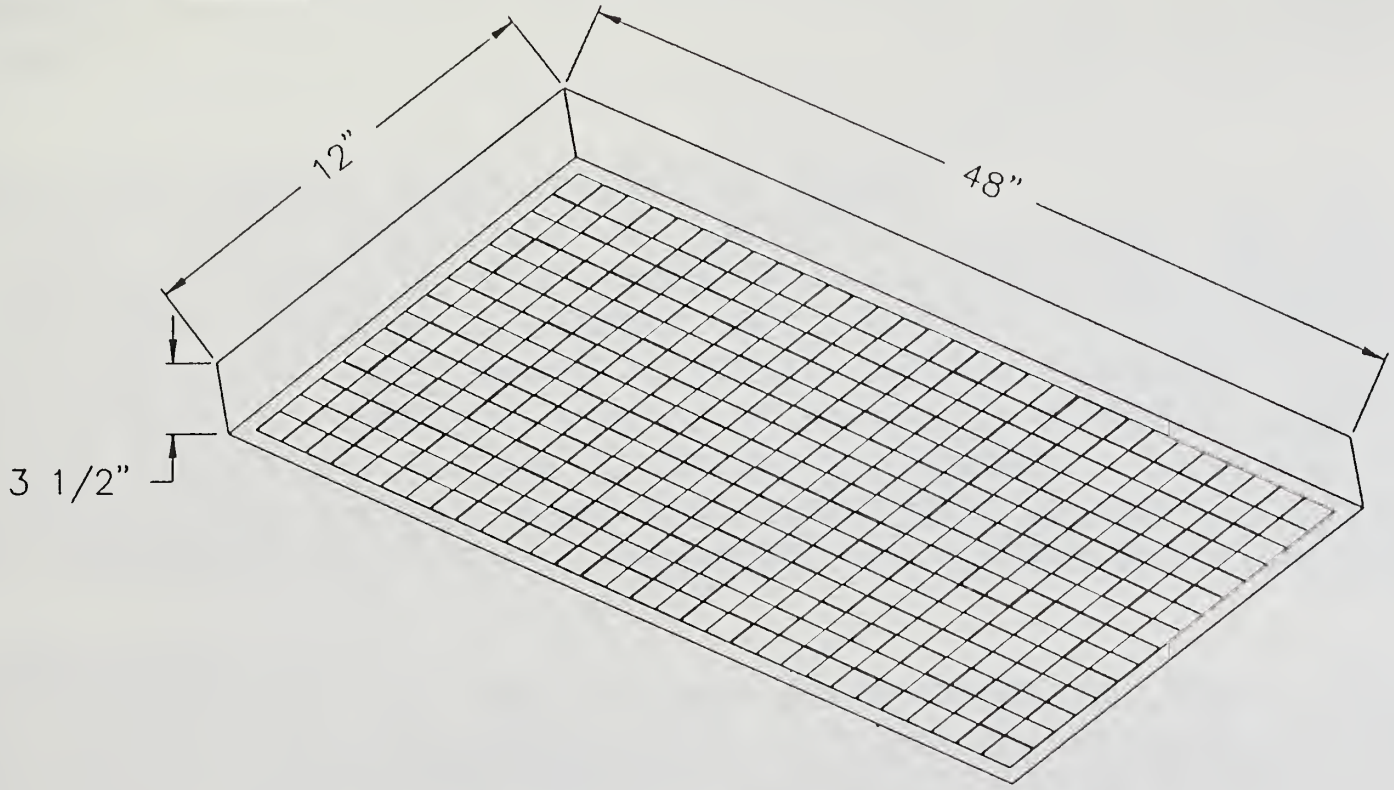
THE LUMINAIRE SHALL HAVE AN AVERAGE BRIGHTNESS IN THE 55°–85° ZONE FROM NADIR NOT IN EXCESS OF 500 FOOT LAMBERTS ENDWISE AND 250 FOOT LAMBERTS LENGTHWISE. THE COEFFICIENT OF UTILIZATION SHALL BE NO LESS THAN 0.41 BASED UPON A CEILNG REFLECTANCE OF 50%, A WALL REFLECTANCE OF 30%, A FLOOR REFLECTANCE OF 20%, AND A ROOM CAVITY RATIO OF 5.

THE LUMINAIRE SHALL BE U.L. APPROVED FOR CEILING MOUNTING WITH SPRING LOADED SUPPORT ARMS AND ADJUSTABLE BRACKET DESIGNED FOR CEILING SUSPENSION SYSTEM AS SHOWN ON DRAWING. LENS SHALL BE CLEAR, ACRYLIC, PRIMASTIC PLASTIC IN EXTRUDED ALUMINUM FRAME WITH SEPARABLE HINGE AND SPRING ACTUATED TRIGGER LATCHES. STEEL WIRING COVER SHALL CONCEAL ALL WIRING AND BALLASTS. ALL ELECTRICAL COMPONENTS SHALL BE REPLACABLE WITHOUT DISTURBING FIXTURE ON CEILING. KNOCK–OUTS SHALL BE LOCATED ON THE SIDES AND ON THE ENDS FOR CENTRAL FEED CONTINUOUS WIRING.

F–10

LAMP 2–4–FOOT–F40 T12 CW
BALLAST RAPID START

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.



2-TUBE SHALLOW DIRECT TYPE LUMINAIRE

THE LUMINAIRE SHALL HAVE AN AVERAGE BRIGHTNESS IN THE 55°-85° ZONE FROM NADIR NOT IN EXCESS OF 600 FOOT LAMBERTS CROSSWISE OR 600 FOOT LAMBERTS ENDWISE. THE COEFFICIENT OF UTILIZATION SHALL BE NO LESS THAN .38 BASED UPON A CEILING REFLECTANCE OF 50%, A WALL REFLECTANCE OF 30%, A FLOOR REFLECTANCE OF 20%, AND A ROOM CAVITY RATIO OF 5.

THE LUMINAIRE SHALL BE UL APPROVED FOR CEILING MOUNTING WITH MINIMUM STRAPS, END TO END, SIDE BY SIDE, OR PATTERN INSTALLATION USING MINIMUM SPACING FOR CEILING INSTALLATION. THE LENS SHALL BE AN EXTRUDED, CLEAR ACRYLIC PRISMATIC PLASTIC. BACKPLATE OF THE BODY SHALL BE RECESSED 1/8 INCH. STEEL WIRING COVER SHALL CONCEAL ALL WIRING AND BALLASTS AND PROVIDE COVER FOR CENTRAL FEED INTO THE FIXTURE. KNOCKOUTS SHALL BE LOCATED IN THE ENDS AND ON THE SIDES. ENCLOSURES SHALL BE MOUNTED IN METAL FRAMES EQUIPPED WITH SEPARABLE HINGES AND SPRING-ACTUATED TRIGGER LATCHES. ALL ELECTRICAL COMPONENTS SHALL BE REPLACEABLE WITHOUT DISTURBING THE FUXTURE ON THE CEILING.

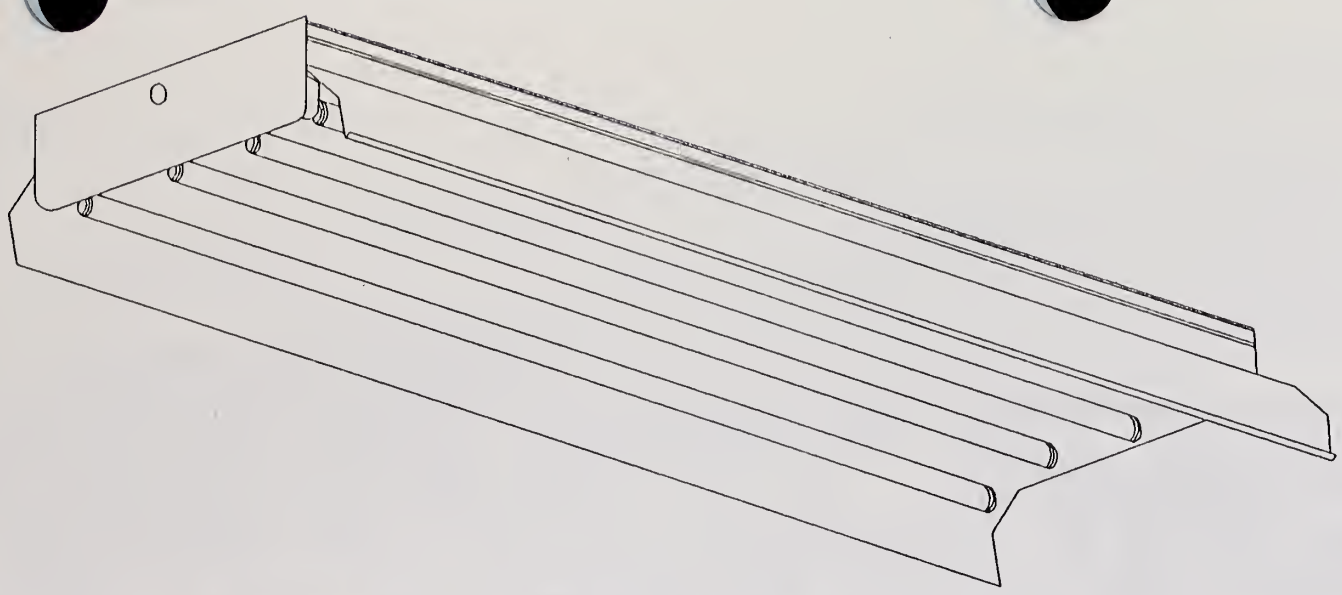
F-1

LAMP
BALLAST

2-4-FOOT F40 T12 CW
RAPID START

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

BALLAST



4 TUBE INDUSTRIAL TYPE LUMINAIR

THE .LUMINAIRE SHALL BE INDUSTRIAL TYPE LIGHTING FIXTURE FOR T–12, RAPID START, 430 MA, FLOURESCENT LAMPS, FOR INDIVIDUAL OR CONTINUOUS MOUNTING AS SHOWN ON THE PLANS. CHANNEL SHALL BE DIE FORMED STEEL NOT LESS THAN 0.032" THICK AFTER FABRICATION. CHANNEL SHALL BE ARRANGED FOR CHAIN, PIPE, STEM OR MESSENGER CABLE HANGERS. SHIELDING ANGLE SHALL BE 13° BELOW HORIZONTAL ON THE AVERAGE, BUT NOT LESS THAN 11–1/2° FOR ANY INDIVIDUAL UNIT. ALL METAL SHALL BE PRETREATED BY A PROTECTIVE COATING OF ZINC PHOSPHATE, APPLIED IN NOT LESS THAN THREE STAGES. FINISH OF CHANNEL BE BAKED WHITE ENAMEL. EXTERIOR OF REFLECTOR SHALL BE HOT–BONDED WHITE ENAMEL WITH A MEAN REFLECTIVE FACTOR OF 88% MINIMUM. CANDLE POWER AT AN ANGLE OF 55° FROM VERTICAL SHALL BE NOT LESS THAN 55% OF VERTICAL (0°).

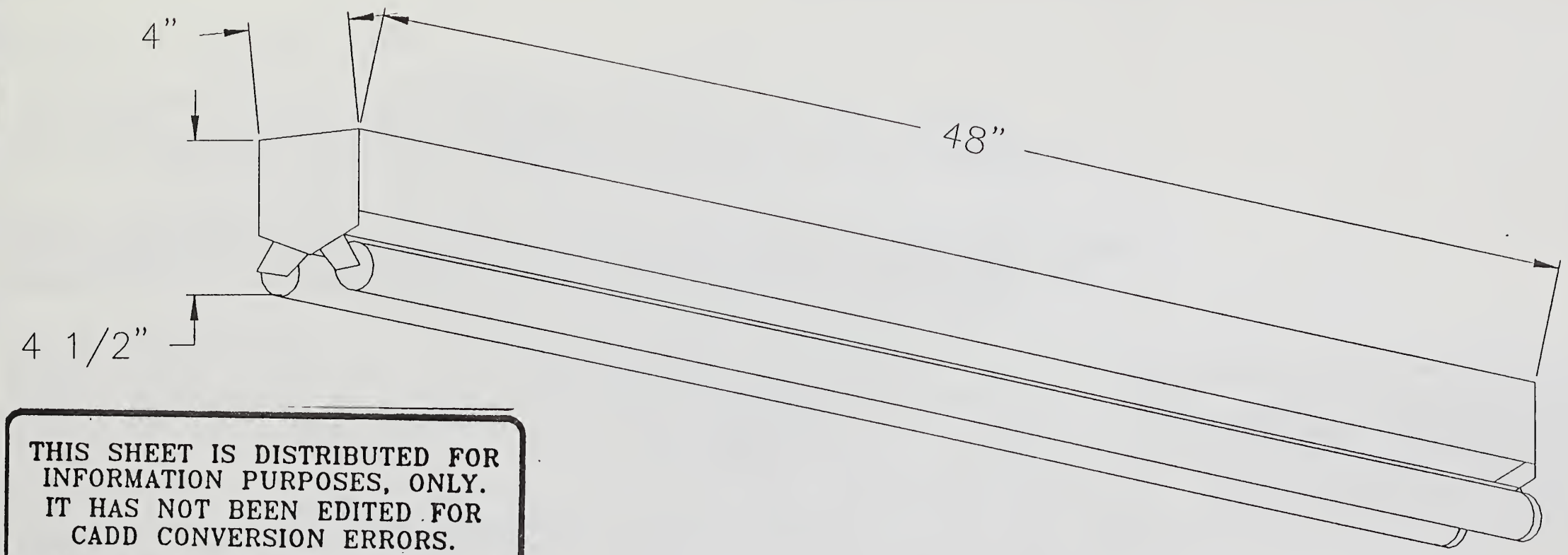
COEFFICIENT OF UTILIZATION SHALL BE .41 BASED ON CEILING REFLECTANCE OF 50%, A WALL REFLECTANCE OF 30%, A FLOOR REFLECTANCE OF 20% AND A ROOM CAVITY RATIO OF 5.

EACH UNIT SHALL BE COMPLETELY WIRED AND EQUIPPED WITH ALL AUXILIARIES, CONFORMING TO F.S. W–L–131. BALLASTS SHALL BE HPF, ETL. PROVIDE HANGERS AND MOUNTING ACCESSORIES AS REQUIRED.

FIXTURE SHALL BEAR UL LABEL.

LAMP	F–20	4–4 FOOT–F40 T 12 CW
BALLAST		RAPID START

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.



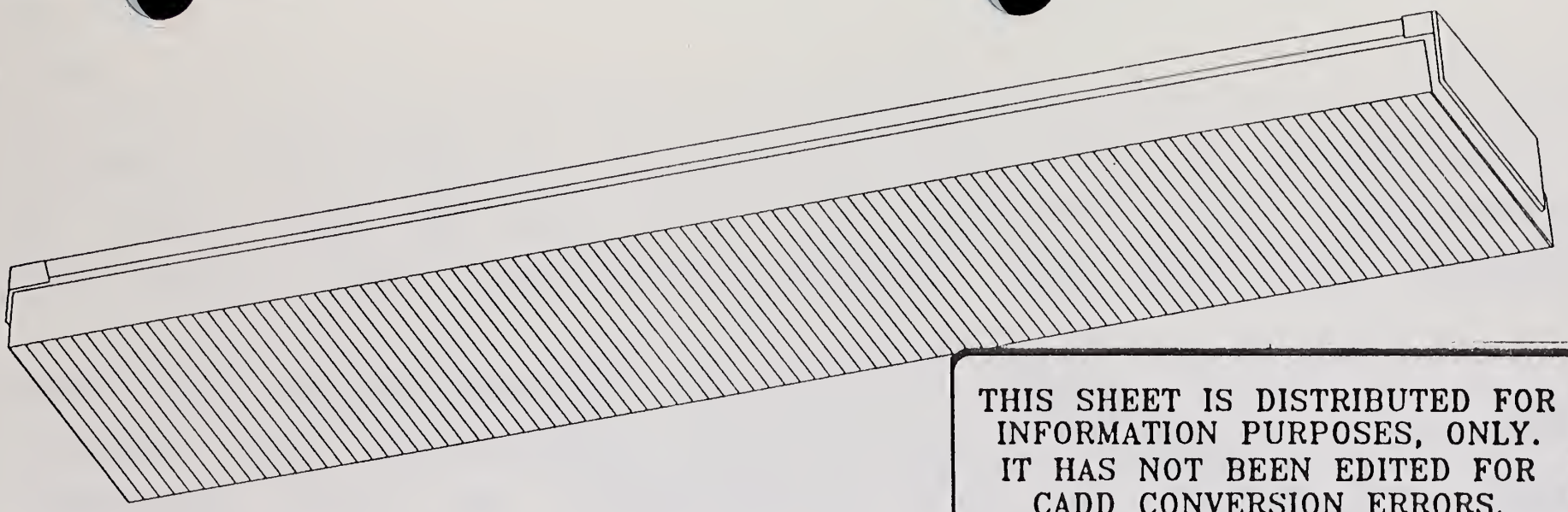
THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

2-TUBE FLUORESCENT STRIP LUMINAIRE

LUMINAIRE SHALL BE COMMERCIAL TYPE WITH 20 GAUGE DIE-FORMED CHANNEL U.L. APPROVED FOR SURFACE MOUNTING. OVERALL DIMENSIONS SHALL BE APPROXIMATELY 4 1/2" X 4" X 48". UNITS SHALL HAVE CONCEALED WIRING AND BALLASTS, KNOCK-OUTS ON THE SIDES AND ON THE ENDS FOR CENTRAL FEED CONTINUOUS WIRING.

F-12

LAMP	2-4-FOOT-F40 T12 CW
BALLAST	RAPID START



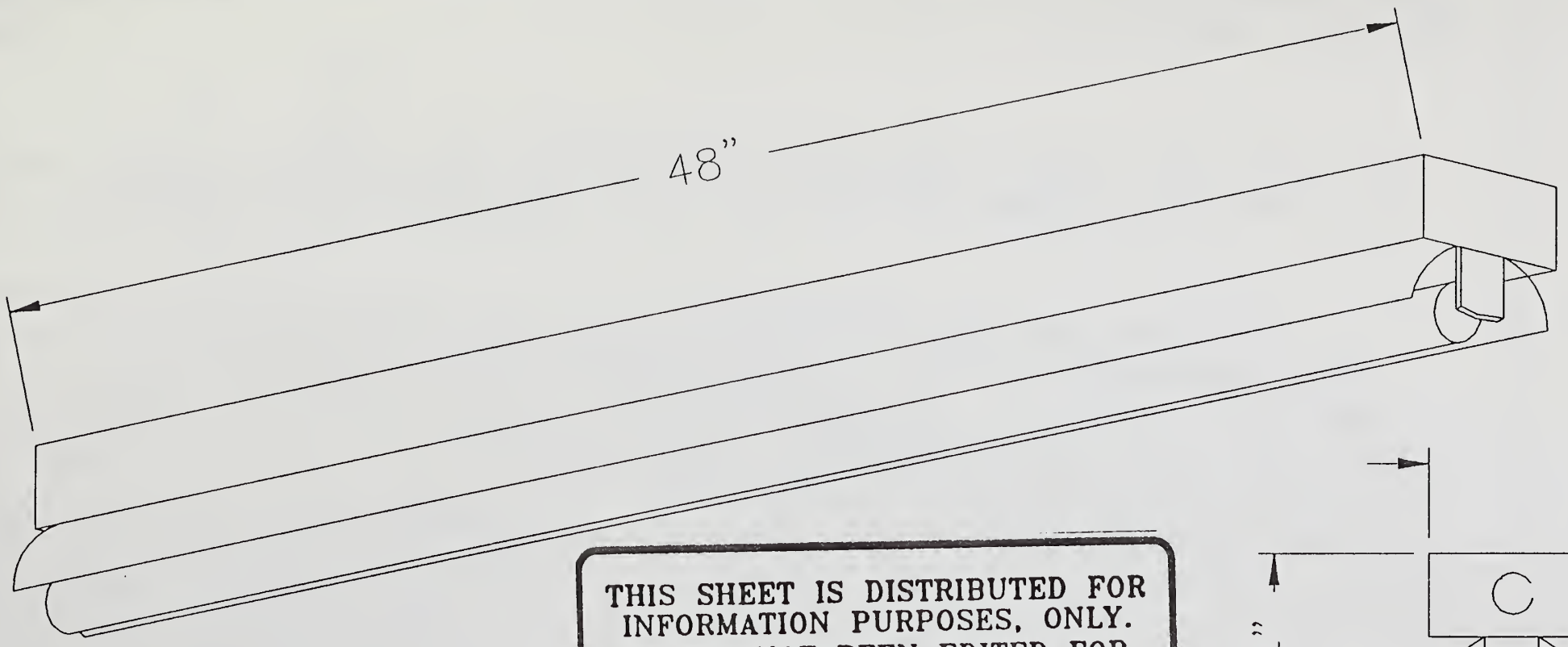
THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

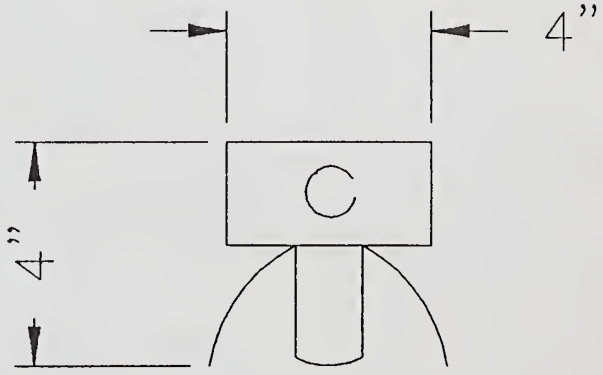
2-TUBE, SHALLOW, DIRECT TYPE LUMINAIRE

LUMINAIRE SHALL VE SUITABLE FOR FLUSH MOUNTING, INDIVIDUALLY OR IN CONTINOUS ROWS. LUMINIARE CHASSIS SHALL BE ONE PIECE COMPLETE WITH FULL-LENGTH WIRING CHANNEL COVER AND ADEQUATE KNOCKOUTS FOR CONVENIENT INSTALLATION. HOUSING SHALL BE "STEP-BACK" TYPE REDUCING APPARENT DEPTH. ENTIRE CHASSIS ASSEMBLY SHALL BE PHOSPHATE PRIMED AND FINISHED IN NON-YELLOWING, CHEMICAL AND HEAT RESISTANT, WHITE BAKED ENAMEL RESULTING IN NOT LESS THAN 85% REFLECTIVITY. LENS SHALL BE "WRAP-AROUND" TYPE HINGING FROM EITHER SIDE AND SHALL BE MADE OF DAMAGE RESISTANT, CLEAR, PRISMATIC ACRYLIC. BALLASTS SHALL BE RAPID START THERMALLY PROTECTED CLASS"P" 120-V. LUMINAIRE SHALL BE U.L. LISTED AND MEET THE REQUIREMENTS OF THE 1981 NATIONAL ELECTRICAL CODE.

THE COEFFICIENT OF UTILIZATION SHALL BE NO LESS THAN 0.50 USING THE ZONAL CAVITY METHOD AND CEILING 80%, WALL 50%, FLOOR 20%, RCR 4.0.

LAMP	F-17	2-48 INCH, F40T12CW
BALLAST		RAPID START





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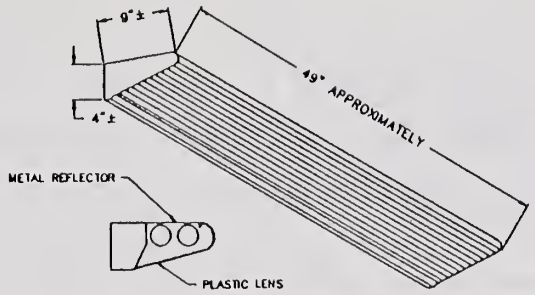
1-TUBE STRIP LUMINAIRE REFLECTOR

LUMINAIRE SHALL BE COMMERCIAL TYPE WITH 20 GUAGE SURFACE MOUNT CHANNEL AND REMOVABLE REFLECTOR AND COVER. OVERALL DIMENSIONS SHALL BE APPROXIMATELY 4" X 4" X 48".

UNIT SHALL HAVE CONCEALED WIRING AND BALLAST, KNOCK-OUTS ON THE SIDES AND ON THE ENDS FOR CENTRAL FEED CONTINUOUS WIRING. FIXTURE SHALL BE U.L. APPROVED FOR SURFACE MOUNTING.

LAMP	F-11	1-4 FOOT-F40 T 12 CW
BALLAST		RAPID START

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.



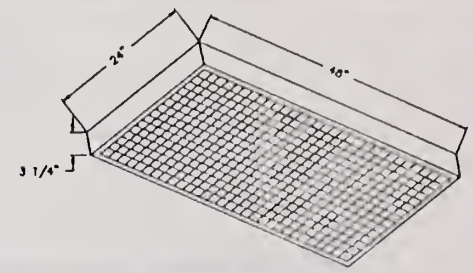
2-TUBE CORRIDOR LUMINAIRE

LUMINAIRE SHALL BE COMMERCIAL TYPE WITH 20 GAUGE DIE-FORMED CHANNEL AND REFLECTOR APPROVED BY U.L. FOR SURFACE MOUNTING. ALL METAL PARTS SHALL BE BONDERIZED AGAINST CORROSION AND FINISHED IN WHITE BAKED ENAMEL. ENCLOSURE SHALL BE AN EXTRUDED, CLEAR PRISMATIC PLASTIC.

EACH UNIT SHALL BE COMPLETELY WIRED AND EQUIPPED WITH ALL AUXILIARIES BALLAST SHALL BE HPF, ETL, 430MA.

EQUIPPED WITH F40T12 LAMPS

F-9
10-24-88



2-TUBE SHALLOW DIRECT TYPE LUMINAIRE

THE LUMINAIRE SHALL HAVE AN AVERAGE BRIGHTNESS IN THE 60°-90° ZONE FROM NADIR NOT IN EXCESS OF 650 FOOT-LAMBERTS ENDWISE OR 700 FOOT-LAMBERTS CROSSWISE. THE COEFFICIENT OF UTILIZATION SHALL BE NO LESS THAN 0.43 BASED UPON A CEILING REFLECTANCE OF 50%, A WALL REFLECTANCE OF 30%, A FLOOR REFLECTANCE OF 10%, AND A ROOM INDEX OF "E"

THE LUMINAIRE SHALL BE U.L. APPROVED FOR CEILING MOUNTING WITH MINIMUM STRAPS, END TO END, SIDE BY SIDE, OR PATTERN INSTALLATION. THE ENCLOSURE SHALL BE A CLEAR ACRYLIC PLASTIC, PROVIDE LOW-BRIGHTNESS LOUVERING COMBINED WITH PRISMS TO OPTICALLY CONTROL ILLUMINATION AND REDUCE BRIGHTNESS. PANELS SHALL HAVE A GRID PATTERN OF SQUARE LOUVERS COVERED BY A PRISMATIC PANEL MOLDED IN ONE PIECE.

WIRING AND BALLASTS AND PROVIDE A COVER FOR CENTRAL FEED INTO THE FIXTURE. KNOCK-OUTS SHALL BE LOCATED IN THE ENDS AND ON THE SIDES. ENCLOSURES SHALL BE MOUNTED IN METAL FRAMES EQUIPPED WITH SEPARABLE HINGES AND STAINLESS STEEL SPRING-ACTUATED TRIGGER LATCHES. ALL ELECTRICAL COMPONENTS SHALL BE REPLACEABLE WITHOUT DISTURBING THE FIXTURE ON THE CEILING. BALLAST SHALL BE 430 MA, INDIVIDUALLY PROTECTED, LOW DECIBAL SOUND RATED, AND MOUNTED IN CONTACT WITH BOTH BACKPLATE AND SIDE WALL OF FIXTURE. ALL STEEL SURFACES SHALL BE PRETREATED BY A PROTECTIVE COATING OF ZINC PHOSPHATE, APPLIED IN A FIVE-STAGE PROCESS. FINAL FINISH SHALL BE HOT-BONDED BAKED WHITE ENAMEL.

THE LUMINAIRE SHALL BE A TANDEM 4-FOOT RAPID START UNIT EQUIPPED WITH F40T12 LAMP AS REQUIRED.

F-2
10-24-88

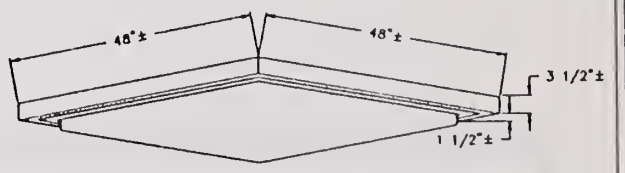


4-TUBE SHALLOW DIRECT TYPE LUMINAIRE

LUMINAIRE SHALL BE SUITABLE FOR FLUSH MOUNTING, INDIVIDUALLY OR IN CONTINOUS ROWS. LUMINAIRE CHASSIS SHALL BE ONE PIECE COMPLETE WITH FULL-LENGTH WIRING CHANNEL COVER AND ADEQUATE KNOCKOUTS FOR CONVENIENT INSTALLATION. HOUSING SHALL BE "STEP-BACK" TYPE REDUCING APPARENT DEPTH. ENTIRE CHASSIS ASSEMBLY SHALL BE PHOSPHATE PRIMED AND FINISHED IN NON-YELLOWING, CHEMICAL AND HEAT RESISTANT, WHITE BAKED ENAMEL RESULTING IN NOT LESS THAN 85% REFLECTIVITY. LENS SHALL BE "WRAP-AROUND" TYPE TINGING FROM EITHER SIDE AND SHALL BE MADE OF DAMAGE RESISTANT, CLEAR, PRISMATIC ACRYLIC. BALLASTS SHALL BE RAPID START THERMALLY PROTECTED CLASS"P" 120-V. LUMINAIRE SHALL BE U.L. LISTED AND MEET THE REQUIREMENTS OF THE 1981 NATIONAL ELECTRICAL CODE.

THE COEFFICIENT OF UTILIZATION SHALL BE NO LESS THAN 0.47 USING THE ZONAL CAVITY METHOD AND CEILING 80%, WALL 50%, FLOOR 20%, RCR 4.0.

LAMP — F-18 — 4-48 INCH, F40T12CW
BALLAST — 10-24-88 — RAPID START



8-TUBE SHALLOW DIRECT TYPE LUMINAIRE

THE LUMINAIRE SHALL HAVE AN AVERAGE BRIGHTNESS IN THE 80°-90° ZONE FROM NADIR NOT IN EXCESS OF 840 FOOT-LAMBERTS ENDWISE OR 800 FOOT-BASED UPON A CEILING REFLECTANCE OF 50%, A WALL REFLECTANCE OF 30%, A FLOOR REFLECTANCE OF 10%, AND A ROOM INDEX OF "E", THE COEFFICIENT OF UTILIZATION SHALL BE NO LESS THAN 0.51.

THE LUMINAIRE SHALL BE U.L. APPROVED FOR CEILING MOUNTING WITH MINIMUM STRAPS, END TO END, SIDE BY SIDE, OR PATTERN INSTALLATION. THE ENCLOSURE SHALL BE A MATT FINISH ACRYLIC PLASTIC. BACKPLATE OF BODY SHALL BE RECESSED 1/8" INCH. STEEL WIRING COVER SHALL CONCEAL ALL WIRING AND BALLAST AND PROVIDE COVER FOR CENTRAL FEED INTO THE FIXTURE. KNOCKOUTS SHALL BE LOCATED IN THE ENDS AND ON THE SIDES ENCLOSURES SHALL BE MOUNTED IN METAL FRAMES EQUIPPED WITH SEPARABLE HINGES AND SPRING-ACTUATED TRIGGER LATCHES. ALL ELECTRICAL COMPONENTS SHALL BE REPLACEABLE WITHOUT DISTURBING THE FIXTURE ON THE CEILING. BALLASTS SHALL BE 430 MA, INDIVIDUALLY PROTECTED, LOW DECIBAL SOUND RATED, AND MOUNTED IN CONTACT WITH BOTH BACKPLATE AND SIDE WALL OF FIXTURE. ALL STEEL SURFACES SHALL BE PRETREATED BY A PROTECTIVE COATING OF ZINC PHOSPHATE, APPLIED IN A FIVE-STAGE PROCESS. FINAL FINISH SHALL BE HOT-BONDED BAKED WHITE ENAMEL.

F-3
10-24-88

LAMP — 8-4-FOOT-F40 T12 CW
BALLAST — RAPID START

EFXCS010
11-29-88

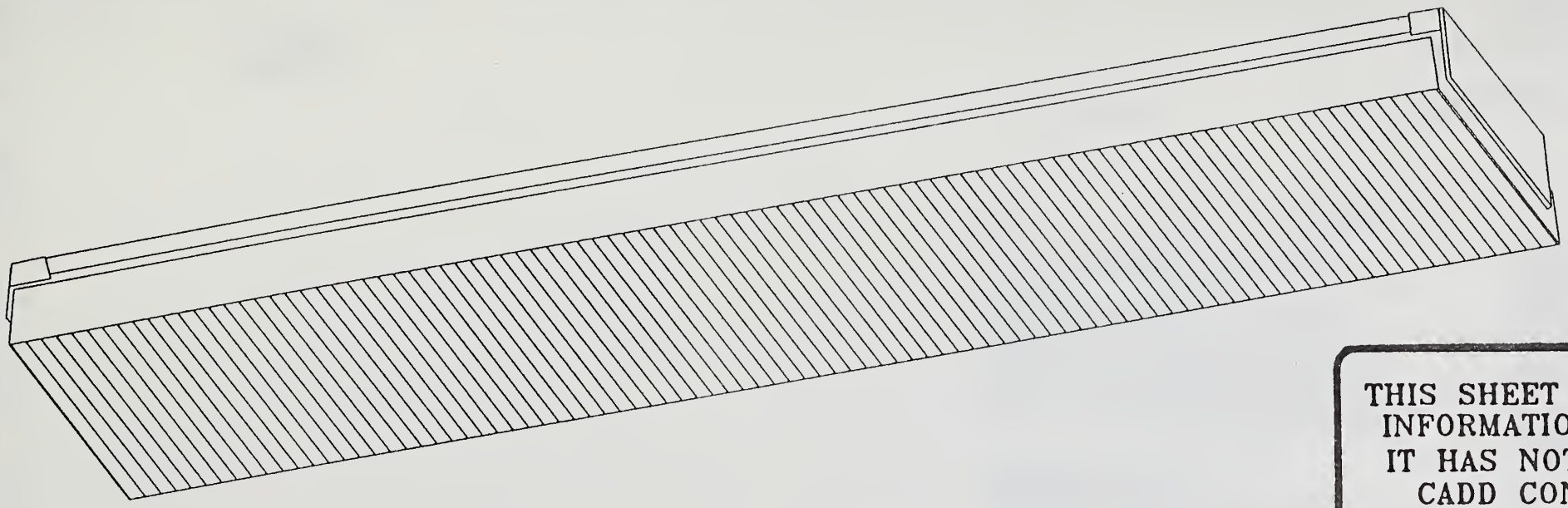
ALL BLOCKS IN THIS DRAWING WERE INSERTED 1 TO 1. THE D-SIZE DWG. WAS PLOTTED 1 TO 1.

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

DRAWN [illegible] DATE 11-29-88
DESIGNED ____ DATE ____
CHECKED ____ DATE ____
APPROVED ____ DATE ____

ELECTRICAL FIXTURE CUT SHEETS
EFXCS010
SHT 10 OF 10

ELECTRICAL DRAWINGS



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4–TUBE, SHALLOW, DIRECT TYPE LUMINAIRE

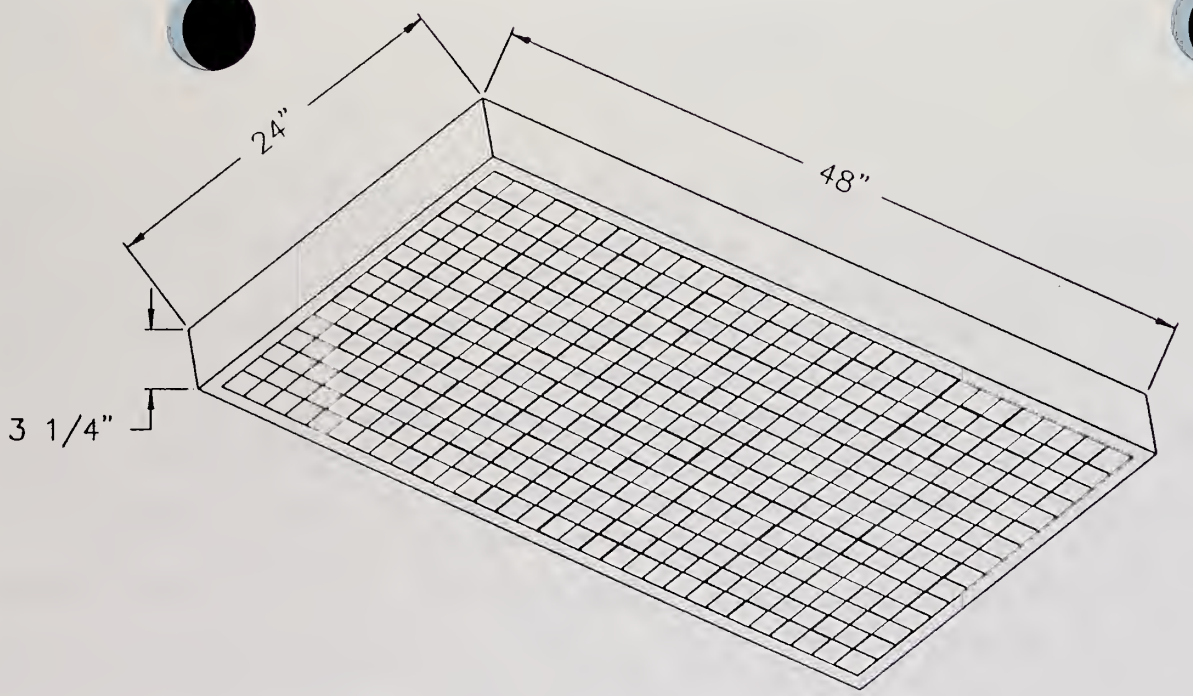
LUMINAIRE SHALL BE SUITABLE FOR FLUSH MOUNTING, INDIVIDUALLY OR IN CONTINOUS ROWS. LUMINAIRE CHASSIS SHALL BE ONE PIECE COMPLETE WITH FULL–LENGTH WIRING CHANNEL COVER AND ADEQUATE KNOCKOUTS FOR CONVENIENT INSTALLATION. HOUSING SHALL BE "STEP–BACK" TYPE REDUCING APPARENT DEPTH. ENTIRE CHASSIS ASSEMBLY SHALL BE PHOSPHATE PRIMED AND FINISHED IN NON–YELLOWING, CHEMICAL AND HEAT RESISTANT, WHITE BAKED ENAMEL RESULTING IN NOT LESS THAN 85% REFLECTIVITY. LENS SHALL BE "WRAP–AROUND" TYPE HINGING FROM EITHER SIDE AND SHALL BE MADE OF DAMAGE RESISTANT, CLEAR, PRISMATIC ACRYLIC. BALLASTS SHALL BE RAPID START THERMALLY PROTECTED CLASS"P" 120–V. LUMINAIRE SHALL BE U.L. LISTED AND MEET THE REQUIREMENTS OF THE 1981 NATIONAL ELECTRICAL CODE.

THE COEFFICIENT OF UTILIZATION SHALL BE NO LESS THAN 0.47 USING THE ZONAL CAVITY METHOD AND CEILING 80%, WALL 50%, FLOOR 20%, RCR 4.0.

LAMP
BALLAST

F–18
10–24–88

4–48 INCH, F40T12CW
RAPID START



3-TUBE SHALLOW DIRECT TYPE LUMINAIRE

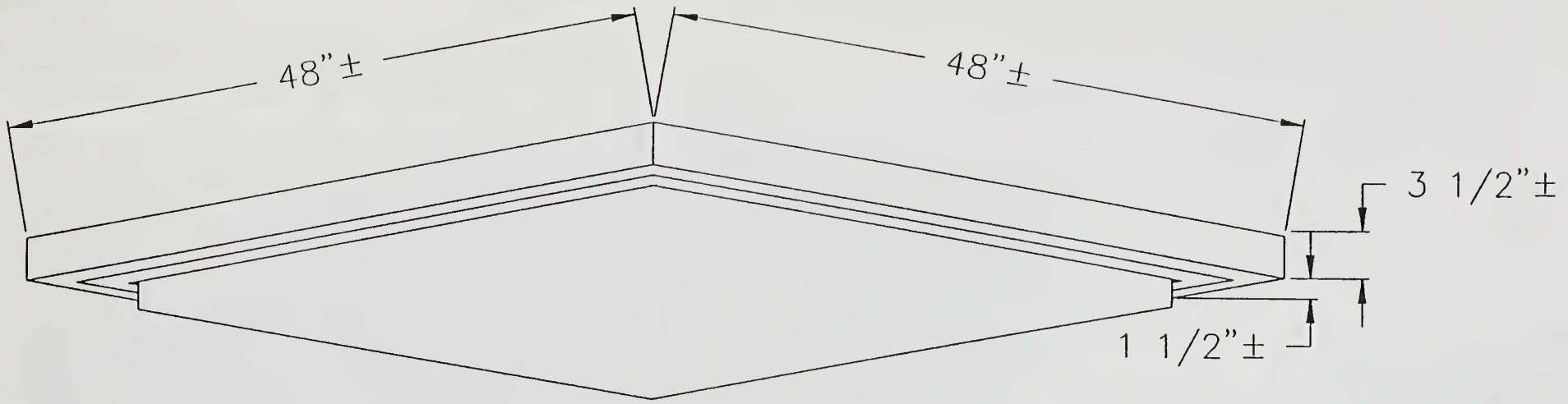
THE LUMINAIRE SHALL HAVE AN AVERAGE BRIGHTNESS IN THE 60°-90° ZONE FROM NADIR NOT IN EXCESS OF 650 FOOT-LAMBERTS ENDWISE OR 700 FOOT-LAMBERTS CROSSWISE. THE COEFFICIENT OF UTILIZATION SHALL BE NO LESS THAN 0.43 BASED UPON A CEILNG REFLECTANCE OF 50%, A WALL REFLECTANCE OF 30%, A FLOOR REFLECTANCE OF 10%, AND A ROOM INDEX OF "E".

THE LUMINAIRE SHALL BE U.L. APPROVED FOR CEILING MOUNTING WITH MINIMUM STRAPS, END TO END, SIDE BY SIDE, OR PATTERN INSTALLATION. THE EN-. CLOSURE SHALL BE A CLEAR ACRYLIC PLASTIC, PROVIDE LOW-BRIGHTNESS LOUVERING COMBINED WITH PRISMA TO OPTICALLY CONTROL ILLUMINATION AND REDUCE BRIGHTNESS. PANELS SHALL HAVE A GRID PATTERN OF SQUARE LOUVERS COVERED BY A PRISMASTIC PANEL MOLDED IN ONE PIECE.

WIRING AND BALLASTS AND PROVIDE A COVER FOR CENTRAL FEED INTO THE FIXTURE. KNOCK-OUTS SHALL BE LOCATED IN THE ENDS AND ON THE SIDES. ENCLOSURES SHALL BE MOUNTED IN METAL FRAMES EQUIPPED WITH SEPARABLE HINGES AND STAINLESS STEEL SPRING-ACTUATED TRIGGER LATCHES. ALL ELECTRICAL COMPONENTS SHALL BE REPLACEABLE WITHOUT DISTURBING THE FIXTURE ON THE CEILING. BALLAST SHALL BE 430 MA, INDIVIDUALLY PROTECTED, LOW DECIBAL SOUND RATED, AND MOUNTED IN CONTACT WITH BOTH BACKPLATE AND SIDE WALL OF FIXTURE. ALL STEEL SURFACES SHALL BE PRETREATED BY A PROTECTIVE COATING OF ZINC PHOSPHATE, APPLIED IN A FIVE-STAGE PROCESS. FINAL FINISH SHALL BE HOT-BONDED BAKED WHITE ENAMEL.

THE LUMINAIRE SHALL BE A TANDEM 4-FOOT RAPID START UNIT EQUIPPED WITH F40T12 LAMP AS REQUIRED.

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6-TUBE SHALLOW DIRECT TYPE LUMINAIRE

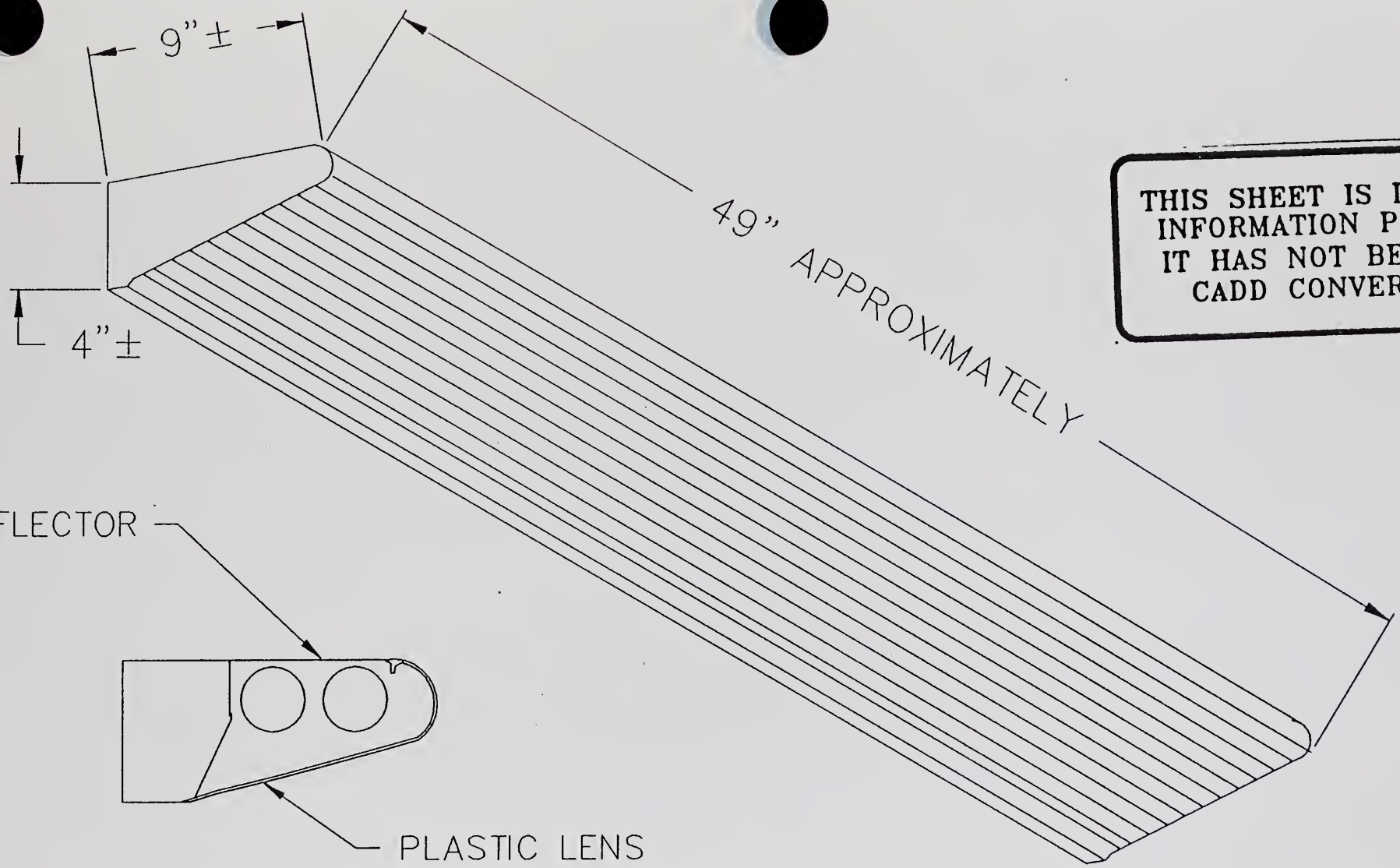
THE LUMINAIRE SHALL HAVE AN AVERAGE BRIGHTNESS IN THE 60°-90° ZONE FROM NADIR NOT IN EXCESS OF 640 FOOT-LAMBERTS ENDWISE OR 800 FOOT-BASED UPON A CEILING REFLECTANCE OF 50%, A WALL REFLECTANCE OF 30%, A FLOOR REFLECTANCE OF 10%, AND A ROOM INDEX OF "E", THE COEFFICIENT OF UTILIZATION SHALL BE NO LESS THAN 0.51.

THE LUMINAIRE SHALL BE U.L. APPROVED FOR CEILING MOUNTING WITH MINIMUM STRAPS, END TO END, SIDE BY SIDE, OR PATTERN INSTALLATION. THE ENCLOSURE SHALL BE A MATT FINISH ACRYLIC PLASTIC. BACKPLATE OF BODY SHALL BE RECESSED 1/8" INCH. STEEL WIRING COVER SHALL CONCEAL ALL WIRING AND BALLAST AND PROVIDE COVER FOR CENTRAL FEED INTO THE FIXTURE. KNOCKOUTS SHALL BE LOCATED IN THE ENDS AND ON THE SIDES. ENCLOSURES SHALL BE MOUNTED IN METAL FRAMES EQUIPPED WITH SEPARABLE HINGES AND SPRING-ACTUATED TRIGGER LATCHES. ALL ELECTRICAL COMPONENTS SHALL BE REPLACEABLE WITHOUT DISTURBING THE FIXTURE ON THE CEILING. BALLASTS SHALL BE 430 MA, INDIVIDUALLY PROTECTED, LOW DECIBAL SOUND RATED, AND MOUNTED IN CONTACT WITH BOTH BACKPLATE AND SIDE WALL OF FIXTURE. ALL STEEL SURFACES SHALL BE PRETREATED BY A PROTECTIVE COATING OF ZINC PHOSPHATE, APPLIED IN A FIVE-STAGE PROCESS. FINAL FINISH SHALL BE HOT-BONDED BAKED WHITE ENAMEL.

LAMP 6-40T-F40 T12 CW
BALLAST RAPID START

BALLAST

RAPID START



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2-TUBE CORRIDOR LUMINAIRE

LUMINAIRE SHALL BE COMMERCIAL TYPE WITH 20 GAUGE DIE-FORMED CHANNEL AND REFLECTOR APPROVED BY U.L. FOR SURFACE MOUNTING. ALL METAL PARTS SHALL BE BONDERIZED AGAINST CORROSION AND FINISHED IN WHITE BAKED ENAMEL. ENCLOSURE SHALL BE AN EXTRUDED, CLEAR PRISMATIC PLASTIC.

EACH UNIT SHALL BE COMPLETELY WIRED AND EQUIPPED WITH ALL AUXILIARIES BALLAST SHALL BE HPF, ETL, 430MA.

EQUIPPED WITH F40T12 LAMPS

F-9
10-24-88

ELECTRICAL DRAWINGS

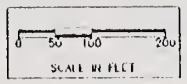
DIVD-3.DWG

3360' X 2260'

BORDER

PLOT 1=1200 FOR 1''=100'

ON A 36'' X 24'' SHEET



U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

DRAWN		DATE
DESIGNED		DATE
CHECKED		DATE
REVIEWED		DATE

1-100FT.DWG

SHT
OF

ELECTRICAL DETAILS

336' X 226'

BORDER

PLOT 1=120 FOR 1"=10'

ON A 36" X 24" SHEET

SCALE IN FEET
0 5 10 20

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

DRAWN _____ DATE _____
DESIGNED _____ DATE _____
CHECKED _____ DATE _____
APPROVED _____ DATE _____

1-10FT.DWG

SHT
OF

33.6 FT X 22.6 FT

BORDER

PLOT 1=12 FOR 1"=1FT

ON A 36" X 24" SHEET

SCALE IN FEET

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

DRAWN ____ DATE ____
DESIGNED ____ DATE ____
CHECKED ____ DATE ____
REVISED ____ DATE ____

1-1FT.DWG

SHT
OF

ELECTRICAL DETAILS

672' X 452'

BORDER

PLOT 1=240 FOR 1"=20'

ON A 36" X 24" SHEET

0 10 20 40
SCALE IN FEET

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

DRAWN	DATE
DESIGNED	DATE
CHECKED	DATE
REVIEWED	DATE

1-20FT.DWG

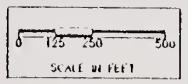
SHT
OF

8400' X 5650'

BORDER

PLOT 1=3000 FOR 1"=250'

ON A 36" X 24" SHEET



U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

DRAWN ____ DATE ____
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REVIEWED ____ DATE ____

1-250FT.DWG

SHT
OF

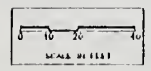
ELECTRICAL DETAILS

840' X 565'

BORDER

PLOT 1=300 FOR 1"=25'

ON A 36" X 24" SHEET



U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

DRAWN ____ DATE
DESIGNED ____ DATE
CHECKED ____ DATE
APPROVED ____ DATE

1-25FT.DWG

SHT.
OF

1680' X 1130'

BORDER

PLOT 1=600 FOR 1''=50'

ON A 36'' X 24'' SHEET

SCALE IN FEET

0 25 50 100

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

DRAWN		DATE
DESIGNED		DATE
CHECKED		DATE
APPROVED		DATE

1-50FT.DWG

SHT
OF

ELECTRICAL DETAILS

33.6" X 22.6" BORDER

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

DRAWN ____ DATE ____
DESIGNED ____ DATE ____
CHECKED ____ DATE ____
REVIEWED ____ DATE ____

ILINBDRN.DWG

SHT
OF

CONTROL LADDER
SCHEMATIC DIAGRAM

1
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U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE THE PACIFIC NORTHWEST REGION	3RDSCHEM.DWG
DRAWN DATE DESIGNED DATE CHECKED DATE REVIEWED DATE	SHT. OF

ELECTRICAL DETAILS

APPROVAL.DWG

R. O. APPROVAL:

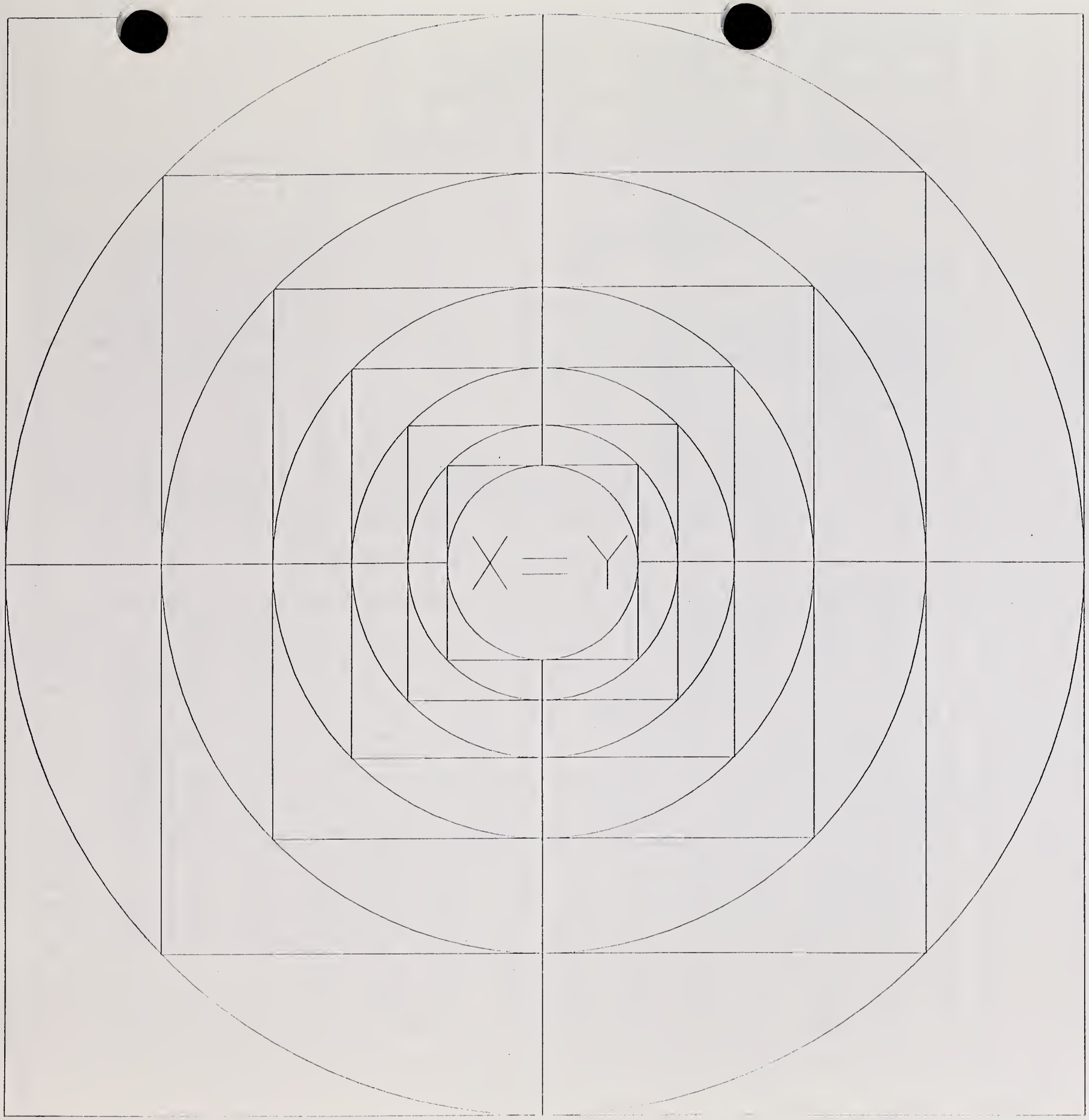
_____ _____

TITLE

APPROVED:

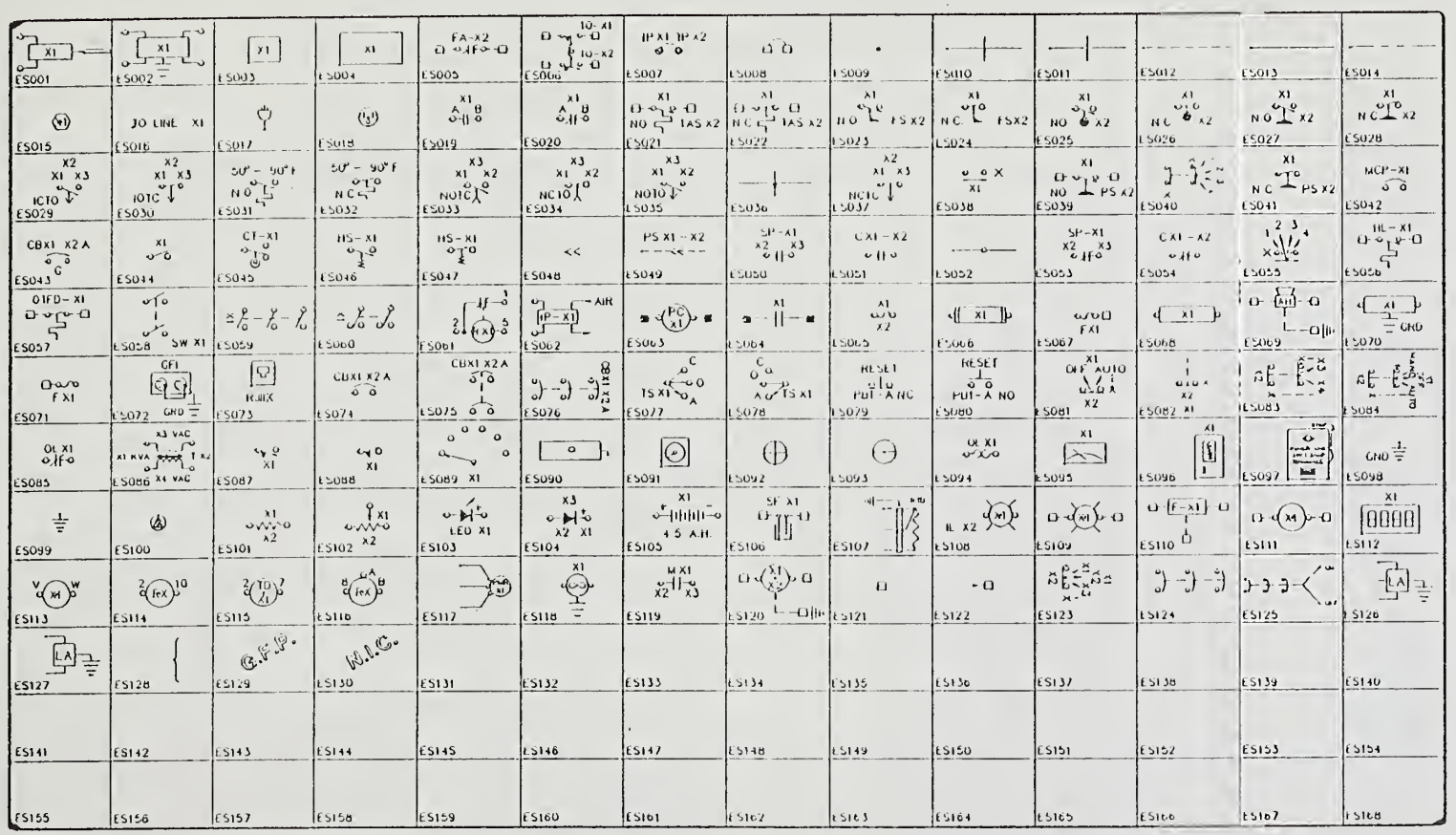
FOREST SUPERVISOR

R. O. STAFF RECOMMENDATION		E
		R
		O



ELECTRICAL DETAILS

CONTROLS



END QUA MID INT INS PER

CEN NEA NOD TAN OSNAP APERT SIZE

LINE CIRCLE ARC ELLIPSE DONUT POLYGON

TRACE SOLID HATCH POINT SKETCH PLINE

ATT. DEF. | ATT. DISP. | ATT. EDIT | ARRAY | MIRROR | PEDIT

LEADER | EXIT | FILLET | SET-VAR | HELP

SCREEN

LIMITS SNAP GRID UNITS STATUS LIST

A C ZOOM D E L P

W MAG PAN | GRAPH SCR | TEXT SCR | MENU

LAYER | COLOR | BY-LAYER | LTYPE SCALE | LTYPE | BASE

REDRAW REGEN AREA | TEXT DTEXT QTEXT

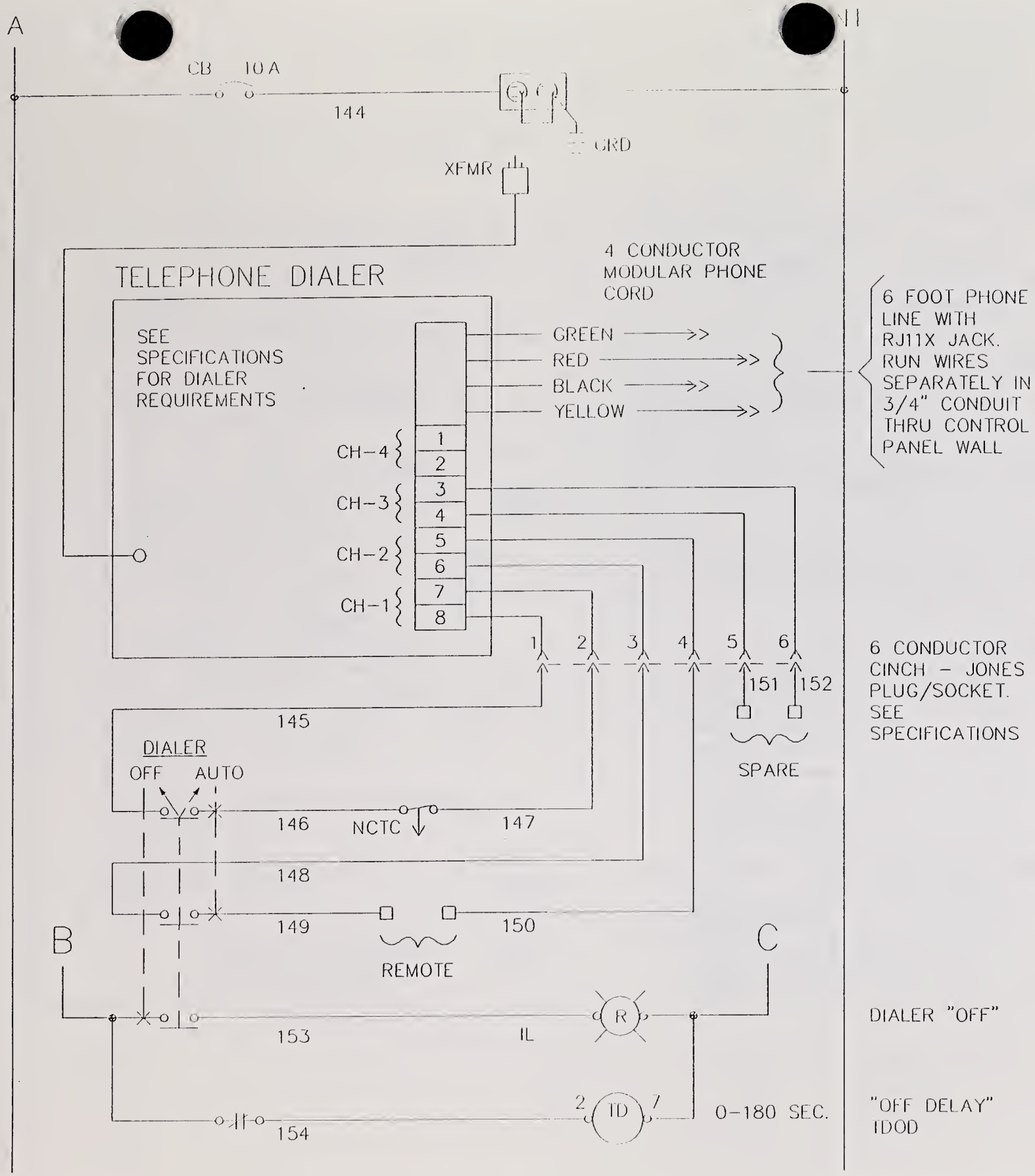
PURGE DIST RENAME STYLE TABLET FILL

CANCEL FILES TIME SHELL ID SELECT

OFFSET	INSERT	BLOCK	SCALE	BREAK	DIVIDE	COPY	PLOT	OOPS	QUIT	1 VIEW D-R-S-W 7
	MINSERT	W BLOCK	ROTATE	STRETCH	MEASURE	MOVE	PRPLOT	U	SAVE	2 5 8
	CHANGE	EXPLODE	DRAG	TRIM	EXTEND	ERASE	REDO	UNDO	END	3 6 9

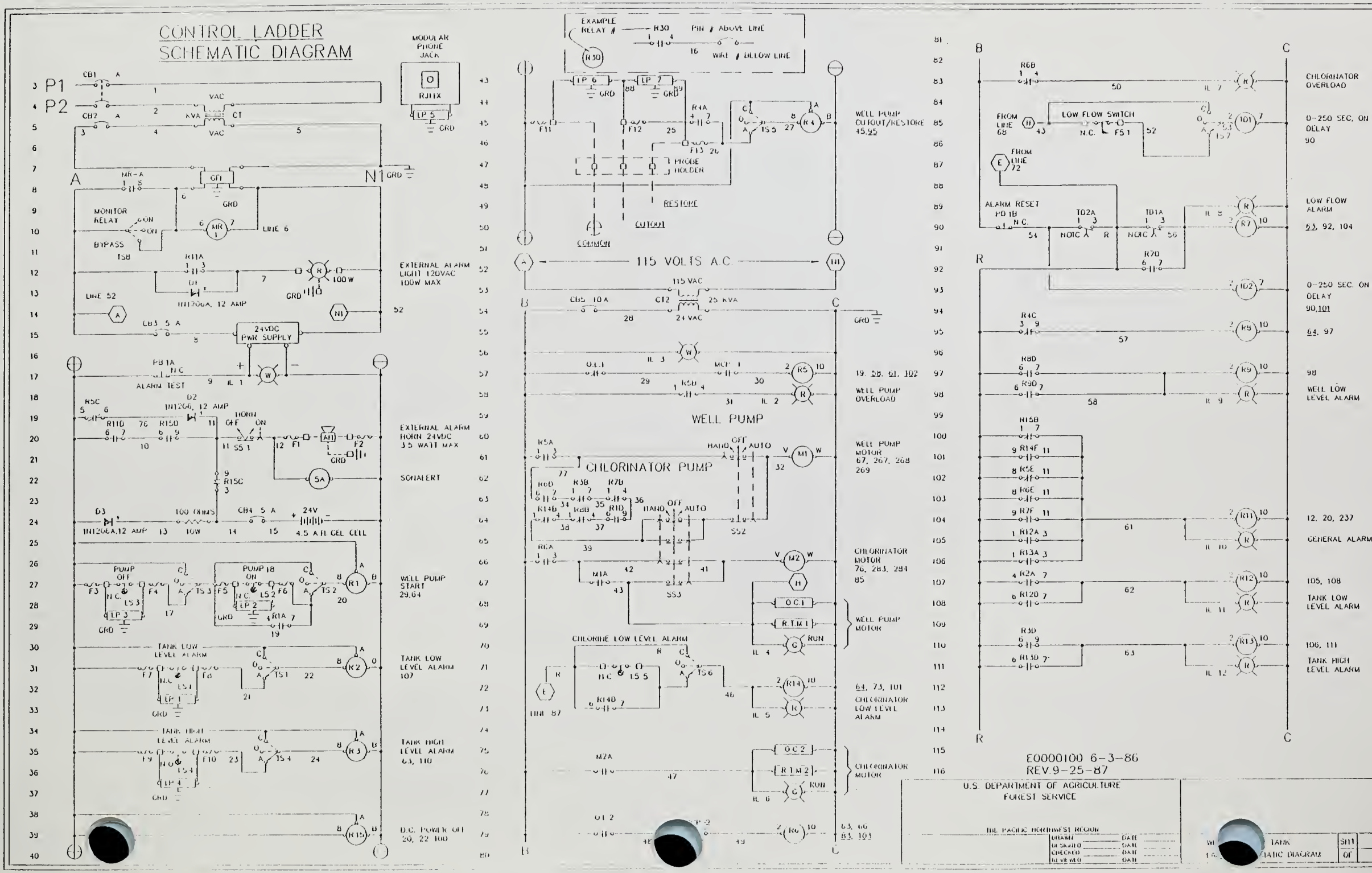
USE CONTROLS.M

CONTROLS.DWG REV 8 5-87



ELECTRICAL DETAILS

CONTROL LADDER SCHEMATIC DIAGRAM



E0000100 6-3-86
REV.9-25-87

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

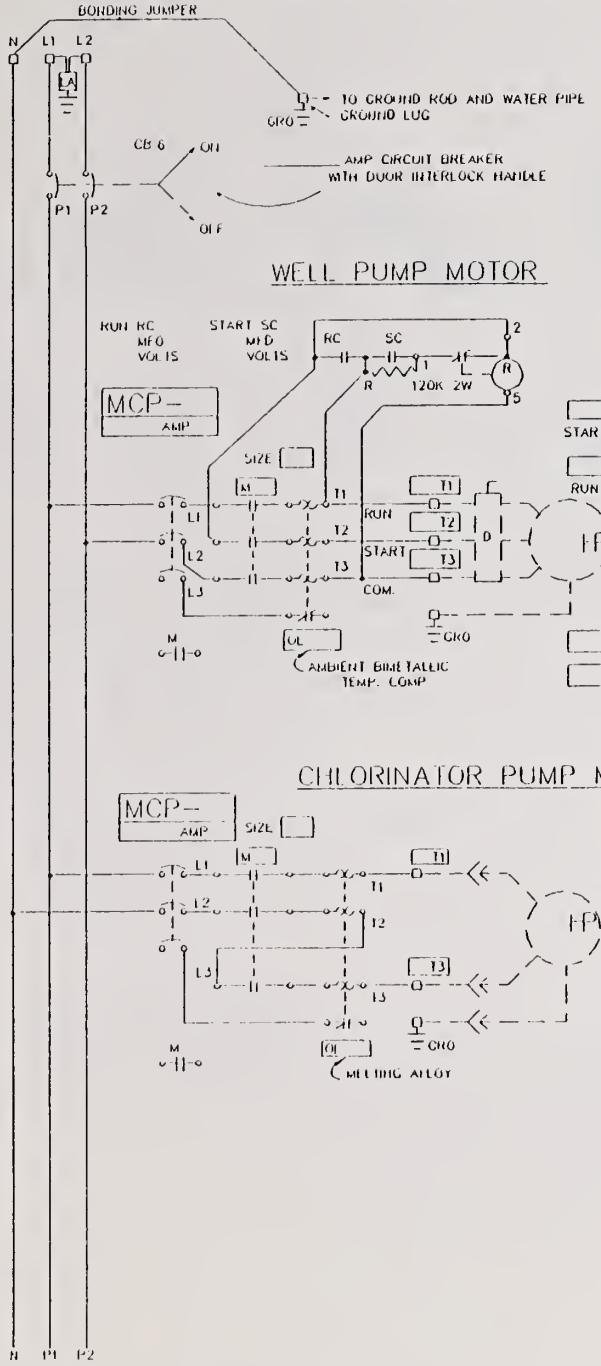
THE PACIFIC NORTHWEST REGION

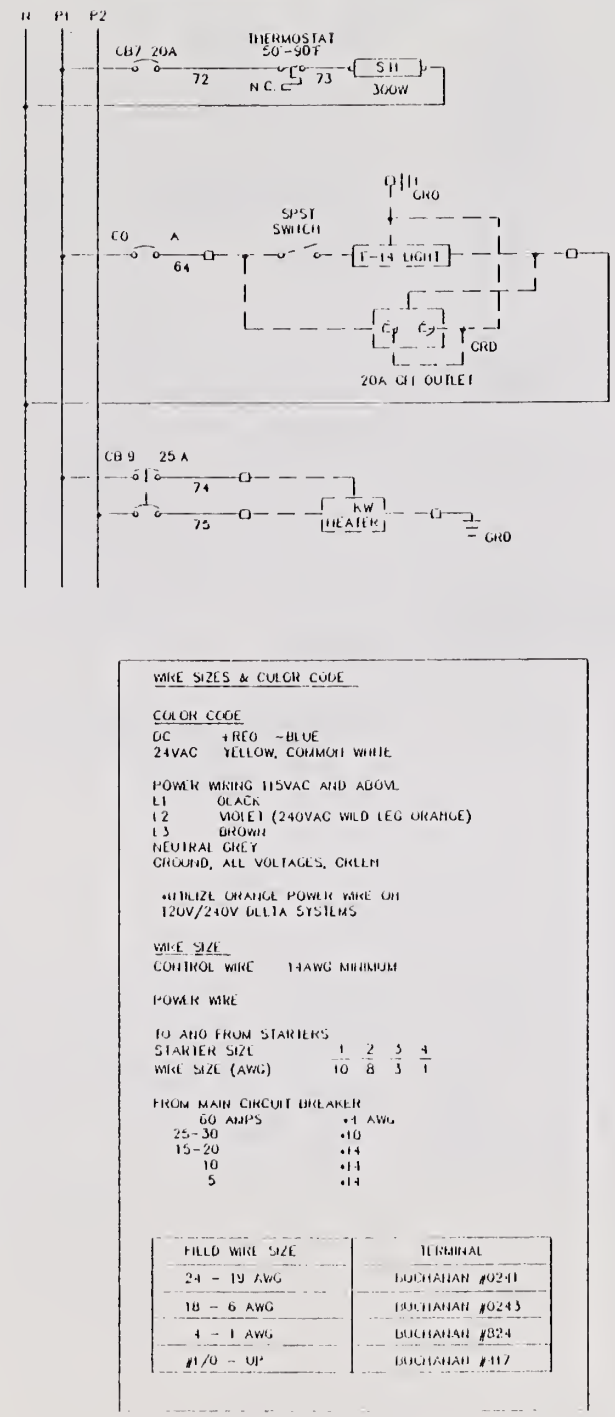
DRAWN ____ DATE
DESIGNED ____ DATE
CHECKED ____ DATE
REVIEWED ____ DATE

TANK
ATIC DIAGRAM

SH1
OF

SERVICE ENTRANCE RATED _____AIC BREAKERS





WIRE SIZES & COLOR CODE

COLOR CODE
DC +RED -BLUE
24VAC YELLOW, COMMON WHITE

POWER WIRING 115VAC AND ABOVE
L1 BLACK
L2 VIOLET (240VAC WILD LEG ORANGE)
L3 BROWN
NEUTRAL GREY
GROUND, ALL VOLTAGES, GREEN

*UTILIZE ORANGE POWER WIRE ON 120V/240V DELTA SYSTEMS

WIRE SIZE
CONTROL WIRE 14AWG MINIMUM

POWER WIRE

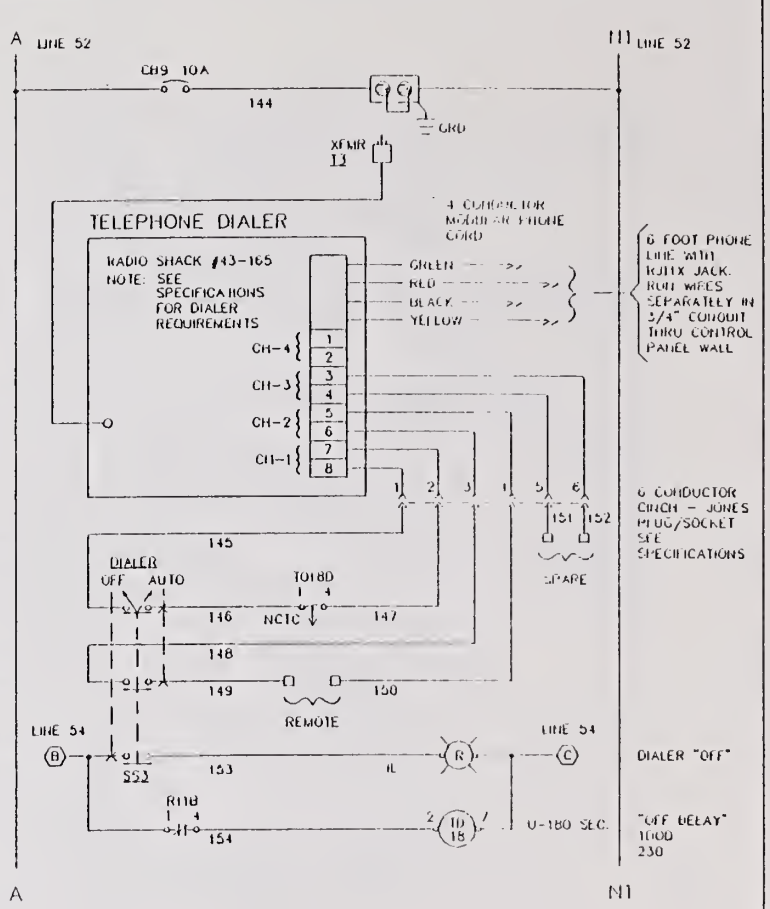
TO AND FROM STARTERS

STARTER SIZE	1	2	3	4
WIRE SIZE (AWG)	10	8	3	1

FROM MAIN CIRCUIT BREAKER

60 AMPS	*4 AWG
25-30	*10
15-20	*14
10	*14
5	*14

FIELD WIRE SIZE	TERMINAL
24 - 19 AWG	BUCHANAN #0241
18 - 6 AWG	BUCHANAN #0243
4 - 1 AWG	BUCHANAN #824
#1/0 - UP	BUCHANAN #117



H.P.	MCP AMPS	#2 HEATER (START)	#1 & #3 HEATER (RUN)	SCR	RCR	F.L.A.
1/3	7	K29	K29	53 220V	-	3.5
1/2	15	K34	K34	71 220V	-	4.8
3/4	15	K39	K39	103 220V	-	6.4
1	15	K43	K43	126 220V	-	8
1 1/2	15	K23	K49	126 220V	10 370V	9.2
2	30	K28	K50	126 220V	20 370V	10
3	30	K37	K56	250 220V	35 370V	14
5	50	K50	K63	259 220V	15 (4) 370V	23

230V, 1Ø SUBMERSIBLE WELL PUMP MOTORS

E0000200
11-4-86
REV.9-25-87

U.S DEPARTMENT OF AGRICULTURE
FOREST SERVICE

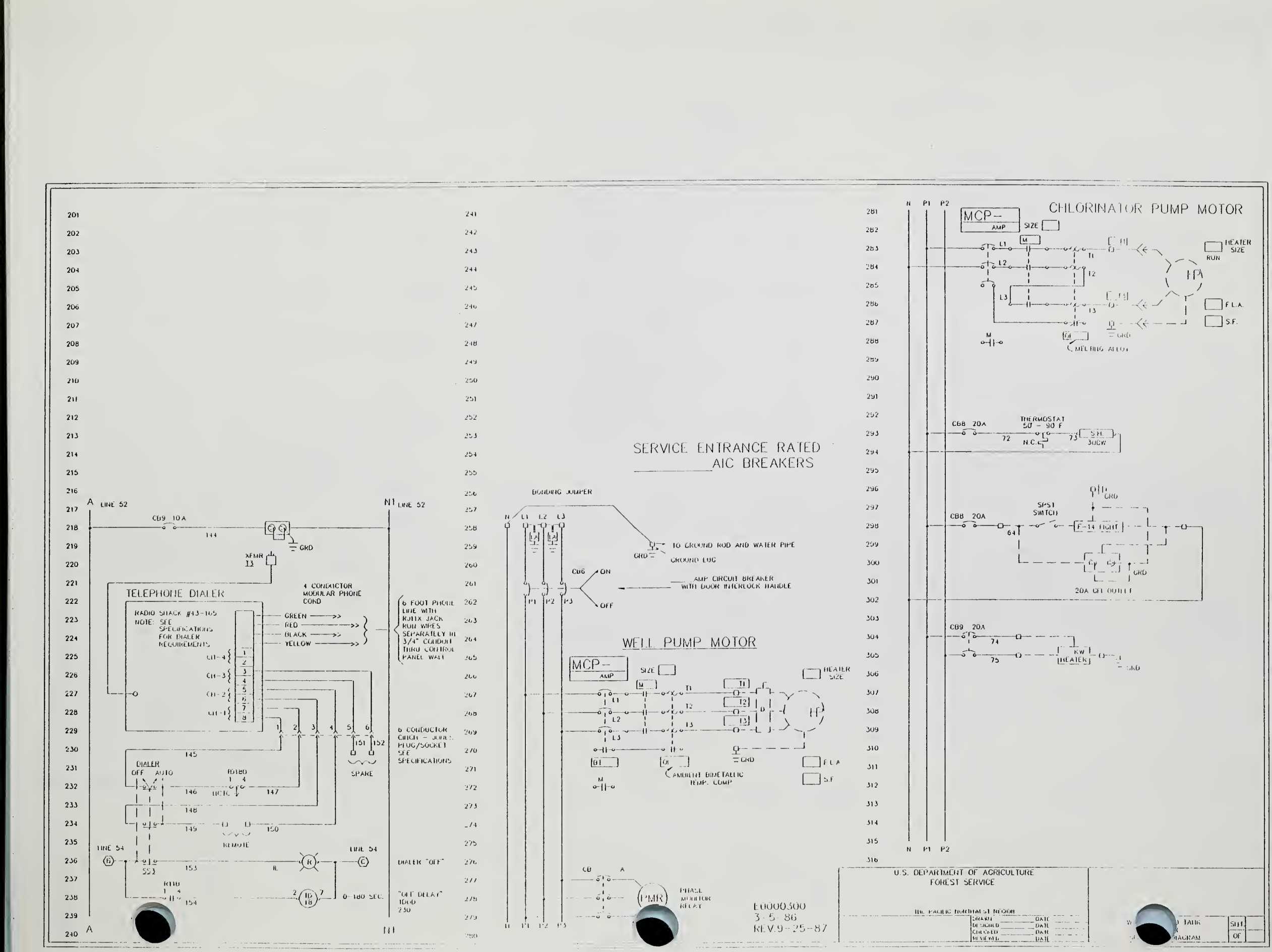
PACIFIC NORTHWEST REGION

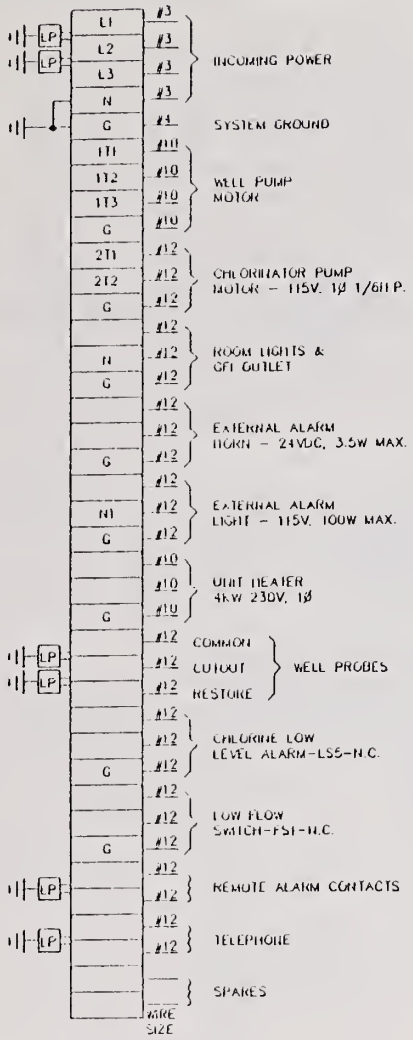
DRAWN		DATE
DESIGNED		DATE
CHECKED		DATE
RELEASED		DATE

WELL PUMP TO TANK CONTROL SCHEMATIC DIAGRAM

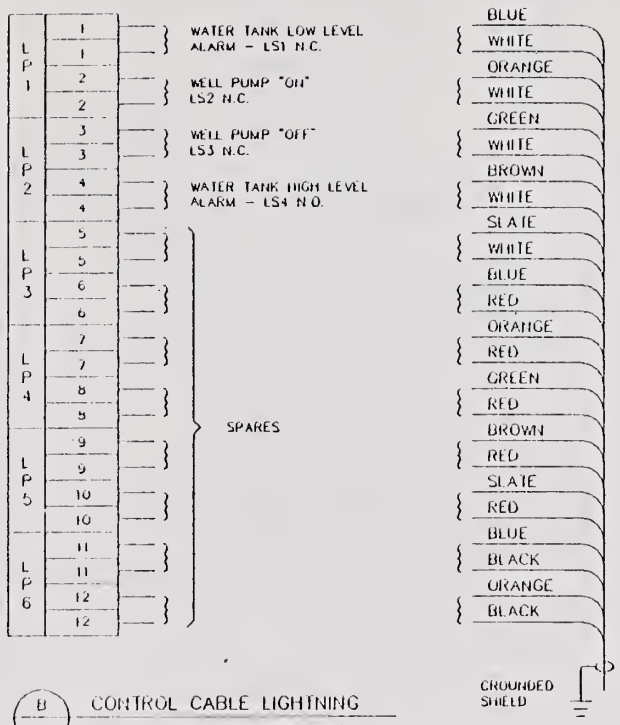
SHT | OF

ELECTRICAL DETAILS

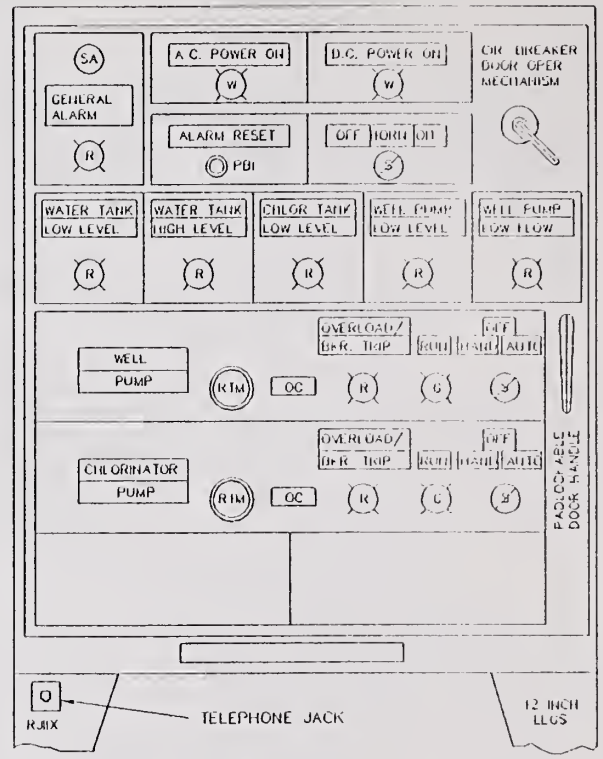

SERVICE ENTRANCE RATED
AIC BREAKERS
BONDING JUMPER
N L1 L2 L3
10 GROUND ROD AND WATER PIPE
GROUND LUG
CB6 ON
OFF
AMP CIRCUIT BREAKER
WITH DOOR INTERLOCK HANDLE
P1 P2 P3
WELL PUMP MOTOR
MCP — AMP
SIZE
HEATER SIZE
AMBIENT BIMETALLIC TEMP. COMP
F.L.A.
S.F.
GRD
PMR
PHASE MONITOR RELAY
CHLORINATOR PUMP MOTOR
RUN
HP
CB8 20A
THERMOSTAT 50 - 90 F
S.H. 300W
N.C.
SPST SWITCH
F-14 LIGHT
20A GFI OUTLET
CB9 20A
KW HEATER
A LINE 52
N1 LINE 52
CB9 10A
144
XFMR T3
TELEPHONE DIALER
4 CONDUCTOR MODULAR PHONE CORD
RADIO STACK #43-165
NOTE: SEE SPECIFICATIONS FOR DIALER REQUIREMENTS
GREEN
RED
BLACK
YELLOW
CH-4
CH-3
CH-2
CH-1
6 FOOT PHONE LINE WITH RJ11X JACK ROU WIRES SEPARATELY IN 3/4" CONDUIT THRU CONTROL PANEL WALL
6 CONDUCTOR CIRCH — JONES PLUG/SOCKET SEE SPECIFICATIONS
145
146
147
148
149
150
151
152
SPARE
DIALER OFF AUTO
RD180
REMOTE
LINE 54
153
IL
DIALER "OFF"
154
0-180 SEC.
"OFF DELAY" 1D00 230
A
N1
E0000500
3-5-86
REV.9-25-87
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
PACIFIC NORTHWEST REGION
DRAWN DATE
DESIGNED DATE
CHECKED DATE
REVIEWED DATE
SHT
OF



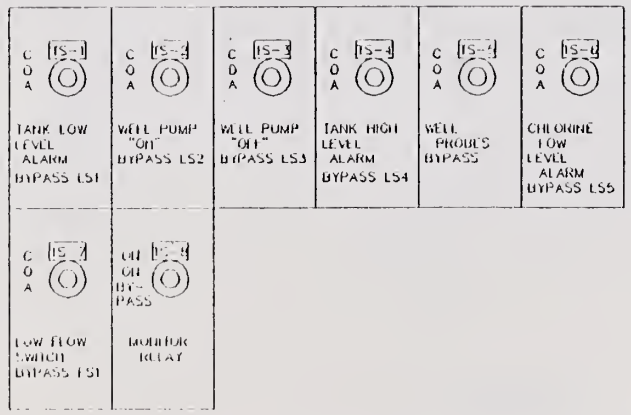
A TERMINAL BLOCK CONNECTIONS
NO SCALE



B CONTROL CABLE LIGHTNING PROTECTOR CONNECTIONS
NO SCALE



D CONTROL PANEL LAYOUT
NO SCALE



C CONTROL PANEL TEST SWITCH LAYOUT
NO SCALE

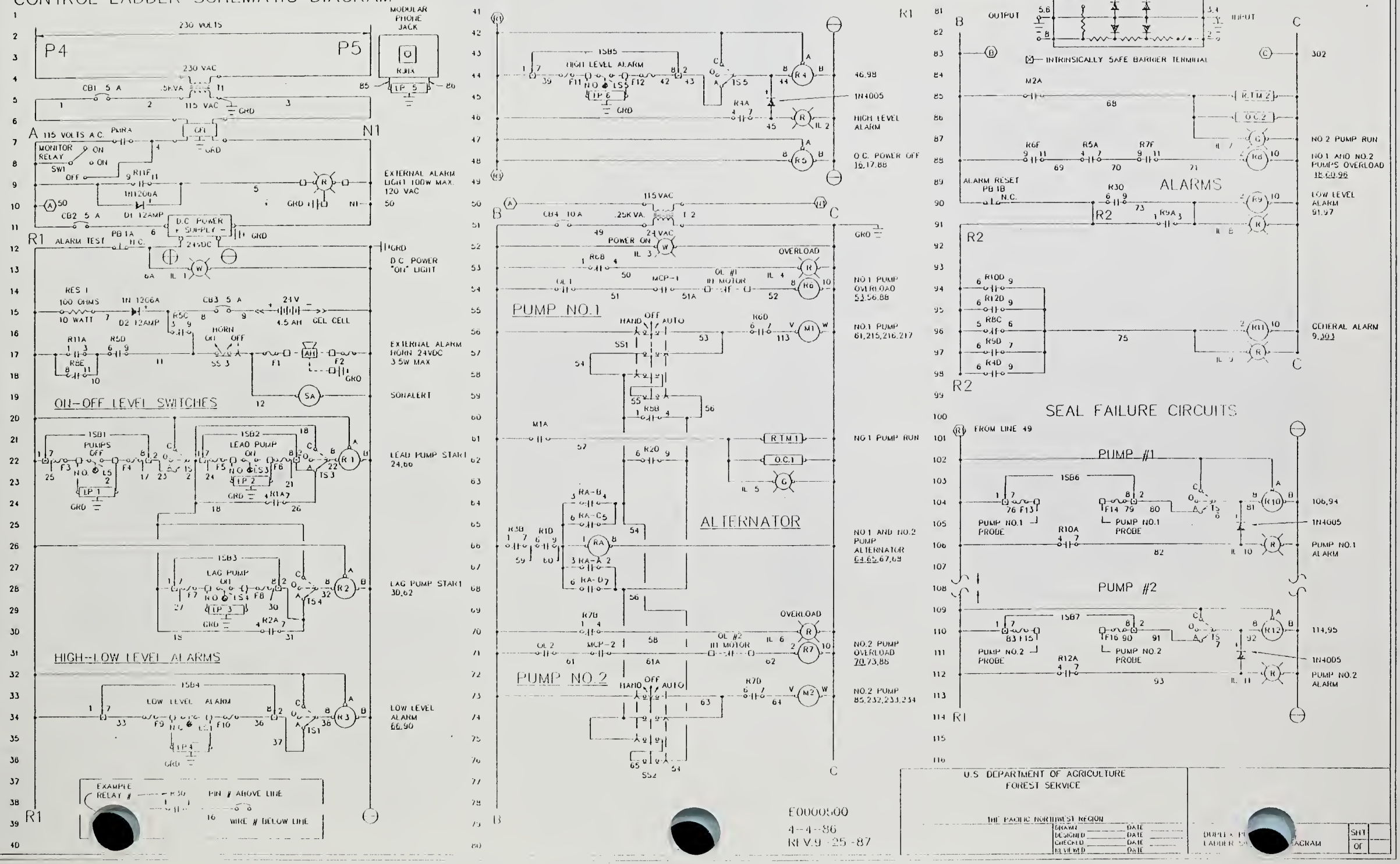
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3-5-86
REV.9-25-87

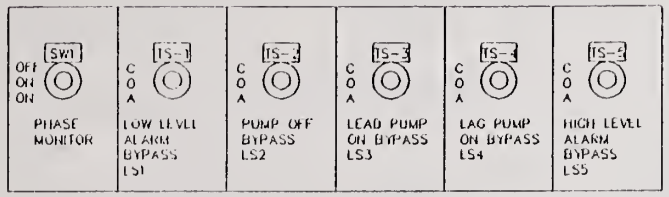
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION
DRAWN DATE
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

WELL PUMP TO TANK CONTROL PANEL LAYOUT AND TERMINAL BLOCK CONNECTIONS
SHT
OF

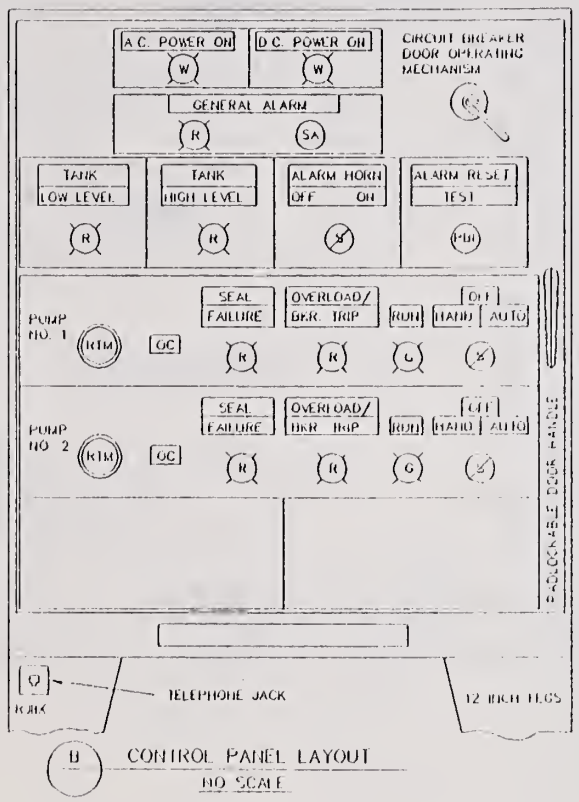
ELECTRICAL DETAILS

CONTROL LADDER SCHEMATIC DIAGRAM





A CONTROL PANEL TEST SWITCH LAYOUT
NO SCALE



B CONTROL PANEL LAYOUT
NO SCALE



C TERMINAL BLOCK CONNECTIONS
NO SCALE

E0000600
3-1-86
REV.9 25-87

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION
DRAWN ____ DATE ____
DESIGNED ____ DATE ____
CHECKED ____ DATE ____
APPROVED ____ DATE ____

DUPLEX PUMP STATION CONTROL PANEL LAYOUT AND TERMINAL BLOCK CONNECTIONS

SHT *
OF

ELECTRICAL DETAILS

MOTOR AND POWER CONNECTIONS

N L1 L2 L3

BONDING JUMPER

TO GROUND ROD AND WATER PIPE

GRD

SERVICE ENTRANCE RATED

LA LA

ON

22000 AIC

OFF

DOOR INTERLOCK DISCONNECT CIRCUIT BREAKER LOCATED IN CONTROL ENCLOSURE

CB5 A

CB6 15A

PMRC

PMRB

PMRA

PHASE MONITOR RELAY

PMR 1

PUMP MOTOR NO.1

MCP— AMP

SIZE

M

T1 RUN T2 START T3 COM.

L1 L2 L3

F13 SEAL FAILURE (SF-)

F14 T1 T2 T3

D

OL

HEATER SIZE

F.L.A.

S.F.

51

OL

AMBIENT BIMETALLIC TEMP. COMP.

GRD

52

51A

PUMP MOTOR NO.2

MCP— AMP

SIZE

M

T1 RUN T2 START T3 COM.

L1 L2 L3

F15 SEAL FAILURE (SF-)

F16 T1 T2 T3

D

OL

HEATER SIZE

F.L.A.

S.F.

61

OL

AMBIENT BIMETALLIC TEMP. COMP.

GRD

62

61A

N P1 P2 P3

N P1 P2

STRIP HEATER 300W SH 240V RATED

107 GFI 108

GFI OUTLET (INSIDE PANEL)

GRD

TAS-1 50°-90°F

CB6 20A

GRD

SPST SWITCH

CB A 64

F-14 LIGHT

GRD

20A GFI OUTLET

CB5 25A

74

75

KW HEATER

GRD

CB8 15A

P4

P5

230V TO CONTROL CIRCUITRY LINE 2

DISCHARGE

SUMP

FLOAT SWITCH FUNCTION

LS5-HIGH ALARM

LS4 LAG PUMP ON

LS3-LEAD PUMP ON

LS2-PUMPS OFF

LS1-LOW ALARM

A LINE 52

CB9 10 A

144

GRD

XFMR T3

TELEPHONE DIALER

RADIO SHACK #43-165 NOTE: SEE SPECIFICATIONS FOR DIALER REQUIREMENTS

4 CONDUCTOR MODULAR PHONE CORD

GREEN

RED

BLACK

YELLOW

CH-4 1 2

CH-3 3 4

CH-2 5 6

CH-1 7 8

1 2 3 4 5 6

151 152

SPARE

145

DIALER OFF AUTO

TO 180 1 4

146 NC TC 147

148

149 150

REMOTE

LINE 54

SS1

153

IL

R

LINE 54

RTIB 1 4

154

2 TD 18 7

0-180 SEC

DIALER "OFF"

"OFF DELAY" TDOD 230

A

III LINE 52

6 FOOT PHONE LINE WITH RJ11X JACK RUN WIRES SEPARATELY IN 3/4" CONDUIT THRU CONTROL PANEL WALL

6 CONDUCTOR CINCH — JONES PLUG/SOCKET. SEE SPECIFICATIONS

III

E0000700

1-30-86

REV.9 28-87

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

DRAWN DATE

DESIGNED DATE

CHECKED DATE

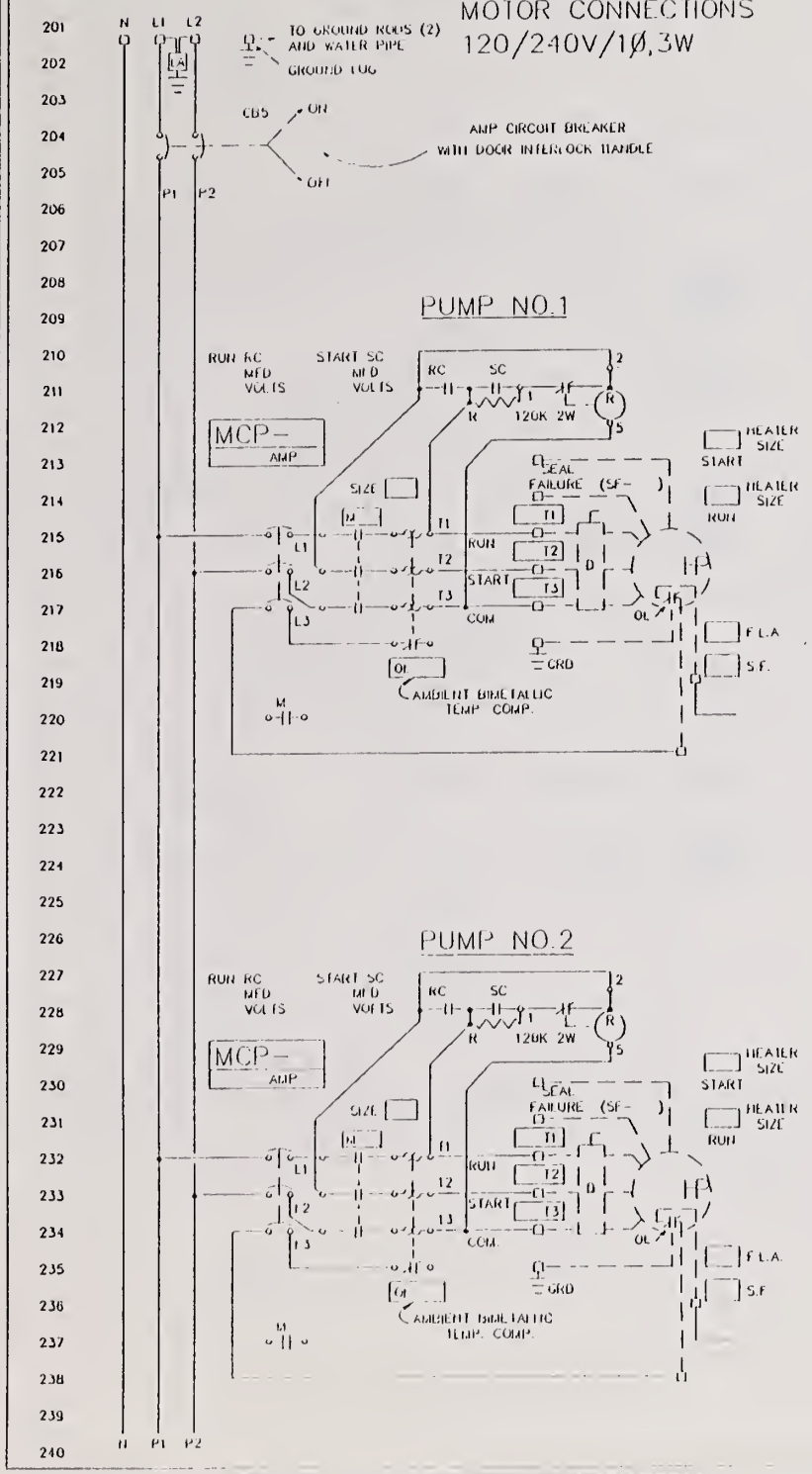
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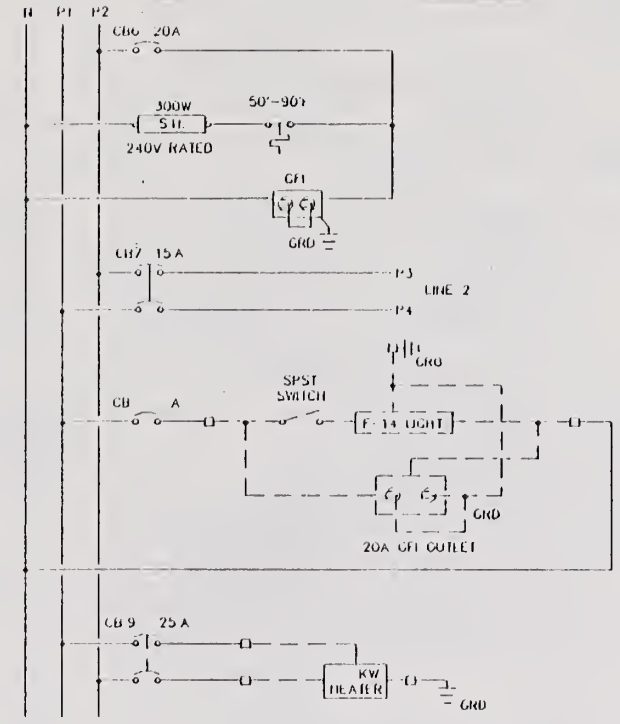
SO BUTTE FALLS

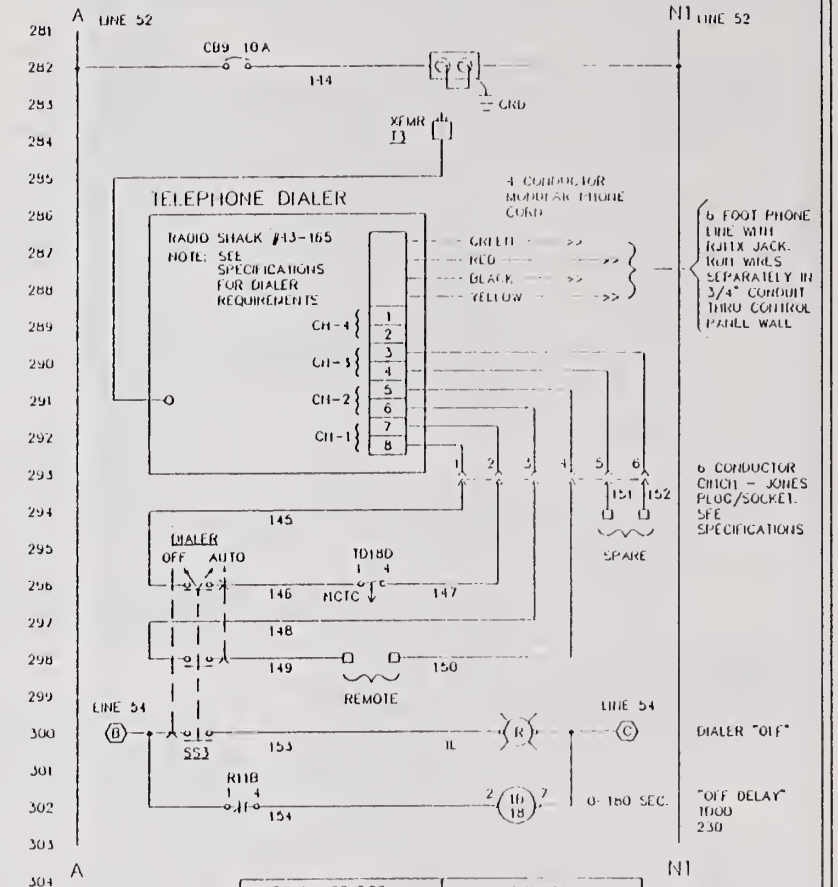
ATION DIAGRAM

SHT OF

MOTOR CONNECTIONS
120/240V/1Ø,3W







FIELD WIRE SIZE	TERMINAL
24 - 19 AWG	BUCHANAN #0241
18 - 6 AWG	BUCHANAN #0243
4 - 1 AWG	BUCHANAN #824
#1/0 - UP	BUCHANAN #417

WIRE SIZES & COLOR CODE

COLOR CODE
DC RED - BLUE
24VAC YELLOW, COMMON WHITE

POWER WIRING 115VAC AND ABOVE
L1 BLACK
L2 VIOLET (240VAC WILD LEG ORANGE)
L3 BROWN
NEUTRAL GREY
GROUND, ALL VOLTAGES, GREEN

•UTILIZE ORANGE POWER WIRE ON 120V/240V DELTA SYSTEMS

WIRE SIZE
CONTROL WIRE 14AWG MINIMUM

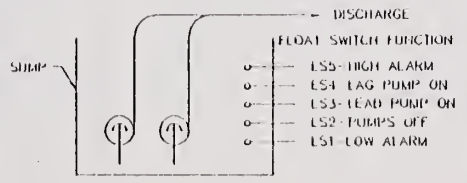
POWER WIRE

TO AND FROM STARTERS

STARTER SIZE	1	2	3	4
WIRE SIZE (AWG)	10	8	3	1

FROM MAIN CIRCUIT BREAKER

60 AMPS	•4 AWG
25 30	•10
15 20	•14
10	•14
5	•14



H.P.	MCP AMPS	#2 HEATER (START)	#1 & #3 HEATER (RUN)	SCuf	RCuf	F.L.A.
1/3	7	K29	K29	53 230V	-	3.5
1/2	15	K34	K34	71 230V	-	4.8
3/4	15	K39	K39	103 230V	-	6.4
1	15	K43	K43	126 230V	-	8
1 1/2	15	K23	K49	126 230V	10 370V	9.2
2	30	K28	K50	126 230V	20 370V	10
3	30	K37	K56	250 230V	35 370V	14
5	50	K50	K63	259 230V	15 (3) 370V	23

230V, 1Ø SUBMERSIBLE WELL PUMP MOTORS

E0000800
11-5-86
REV 9-28-87

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

PACIFIC NORTHWEST REGION

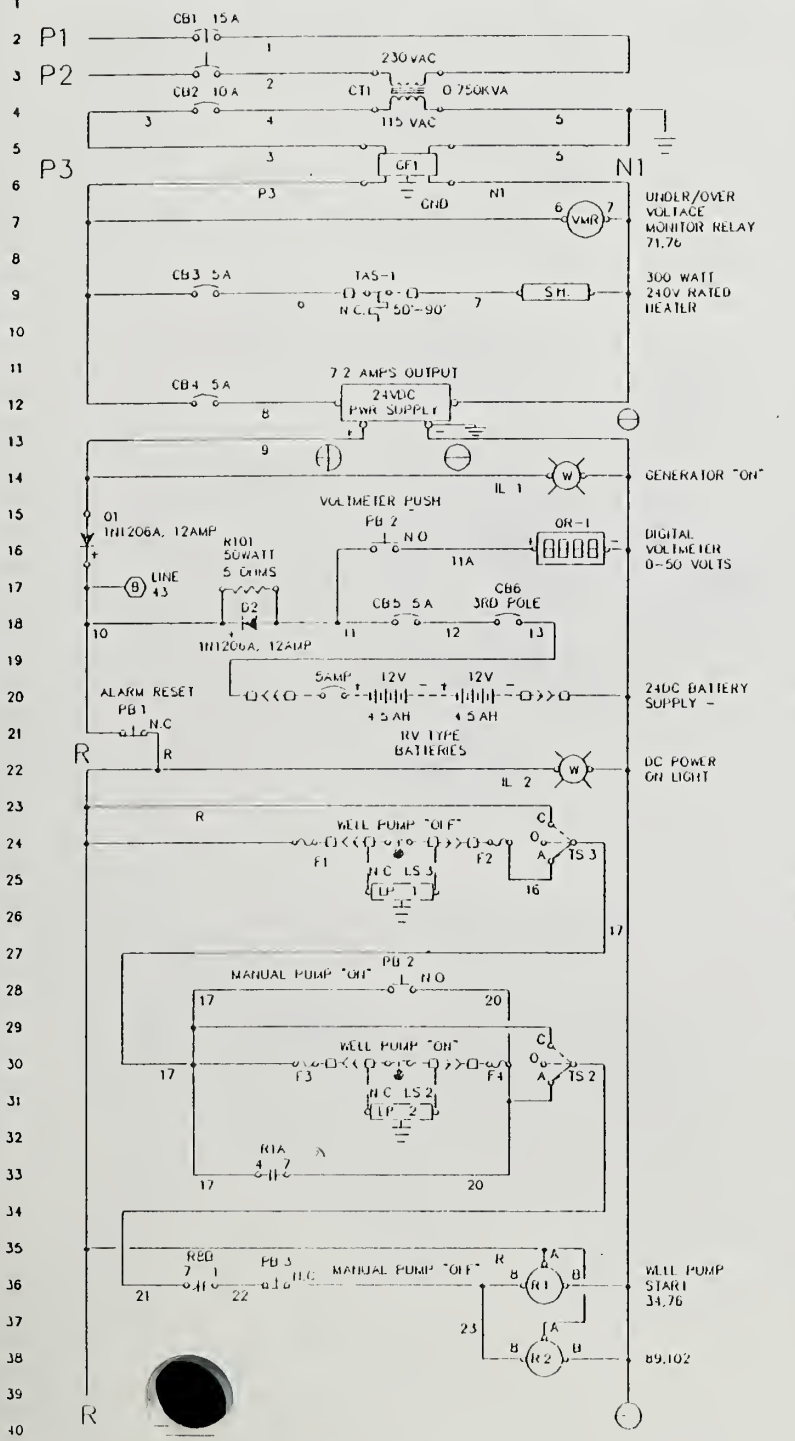
DRAWN		DATE
DESIGNED		DATE
CHECKED		DATE
APPROVED		DATE

DUPLEX PUMP STATION LADDER SCHEMATIC DIAGRAM

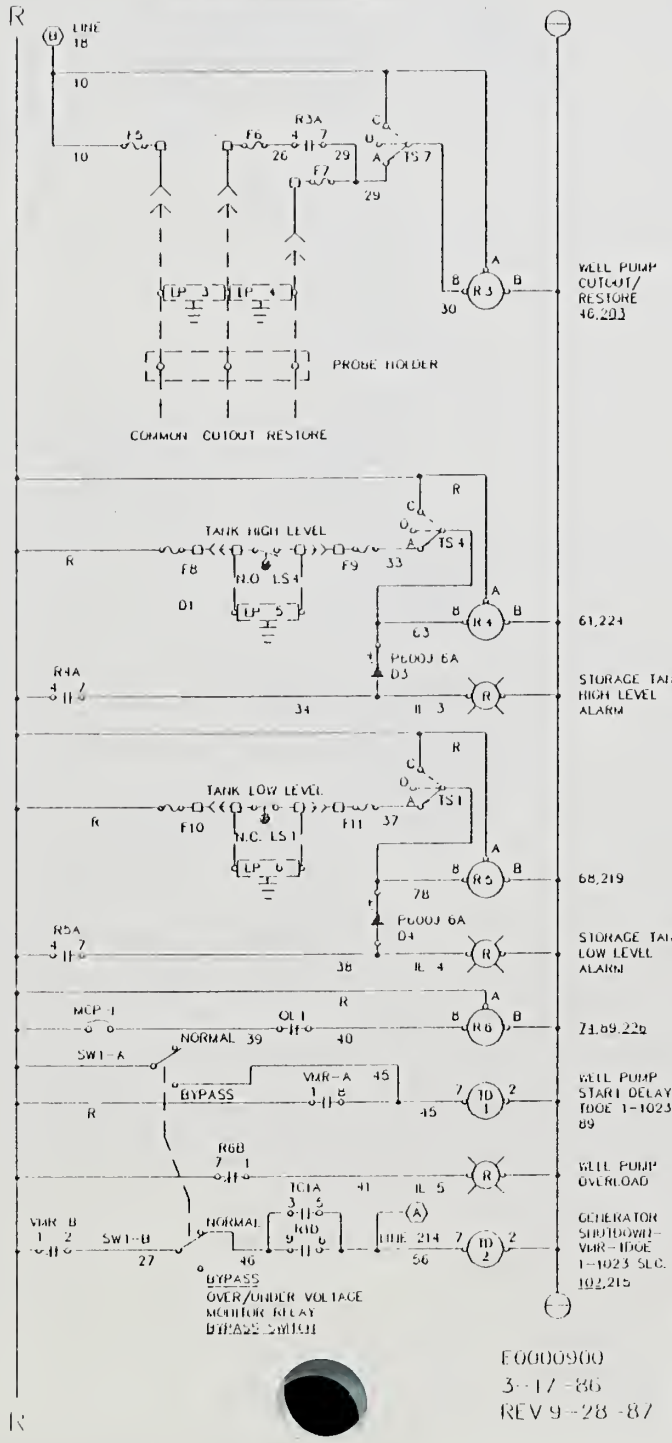
SHT OF

ELECTRICAL DETAILS

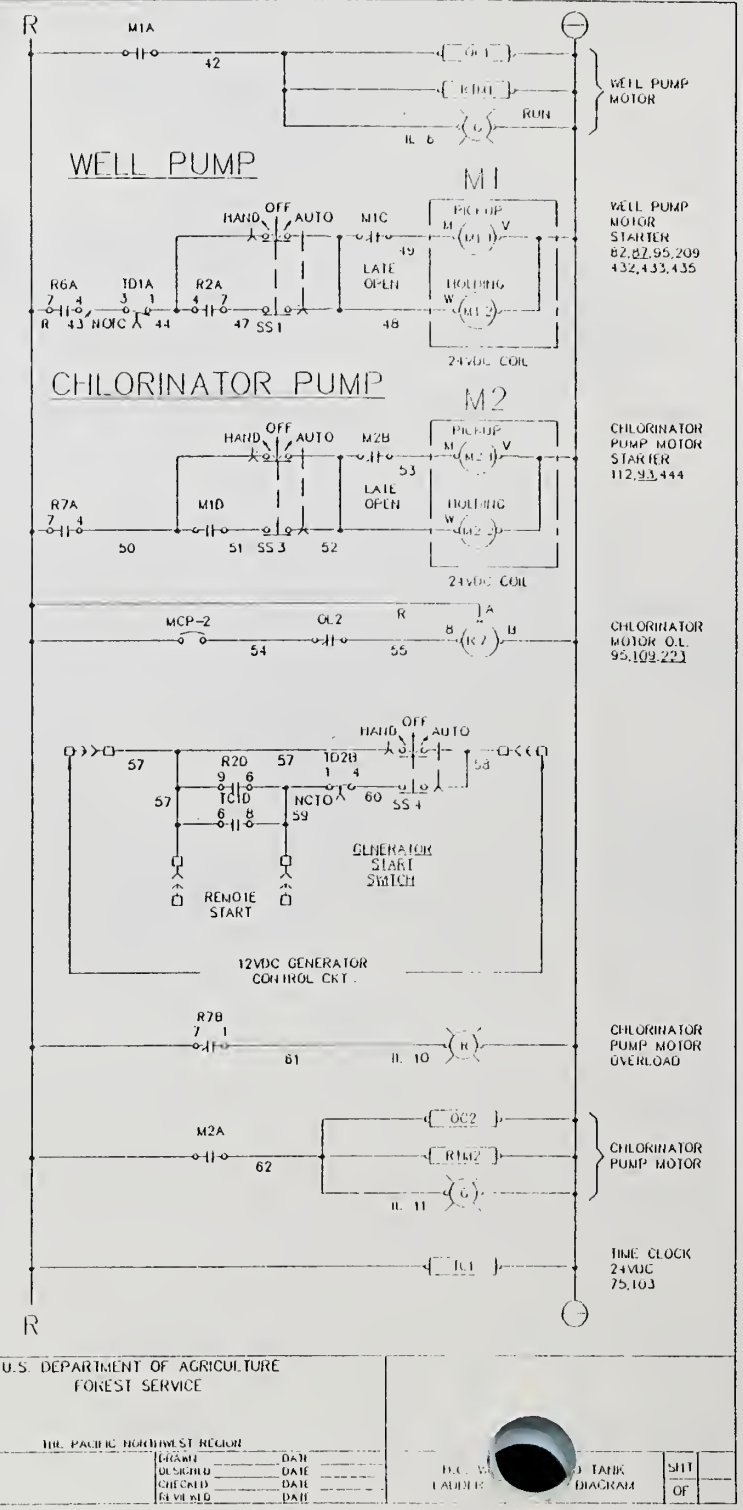
CONTROL LADDER SCHEMATIC DIAGRAM



WELL PROBES



E0000900
3-17-86
REV 9-28-87



U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

TRL PACIFIC NORTHWEST REGION

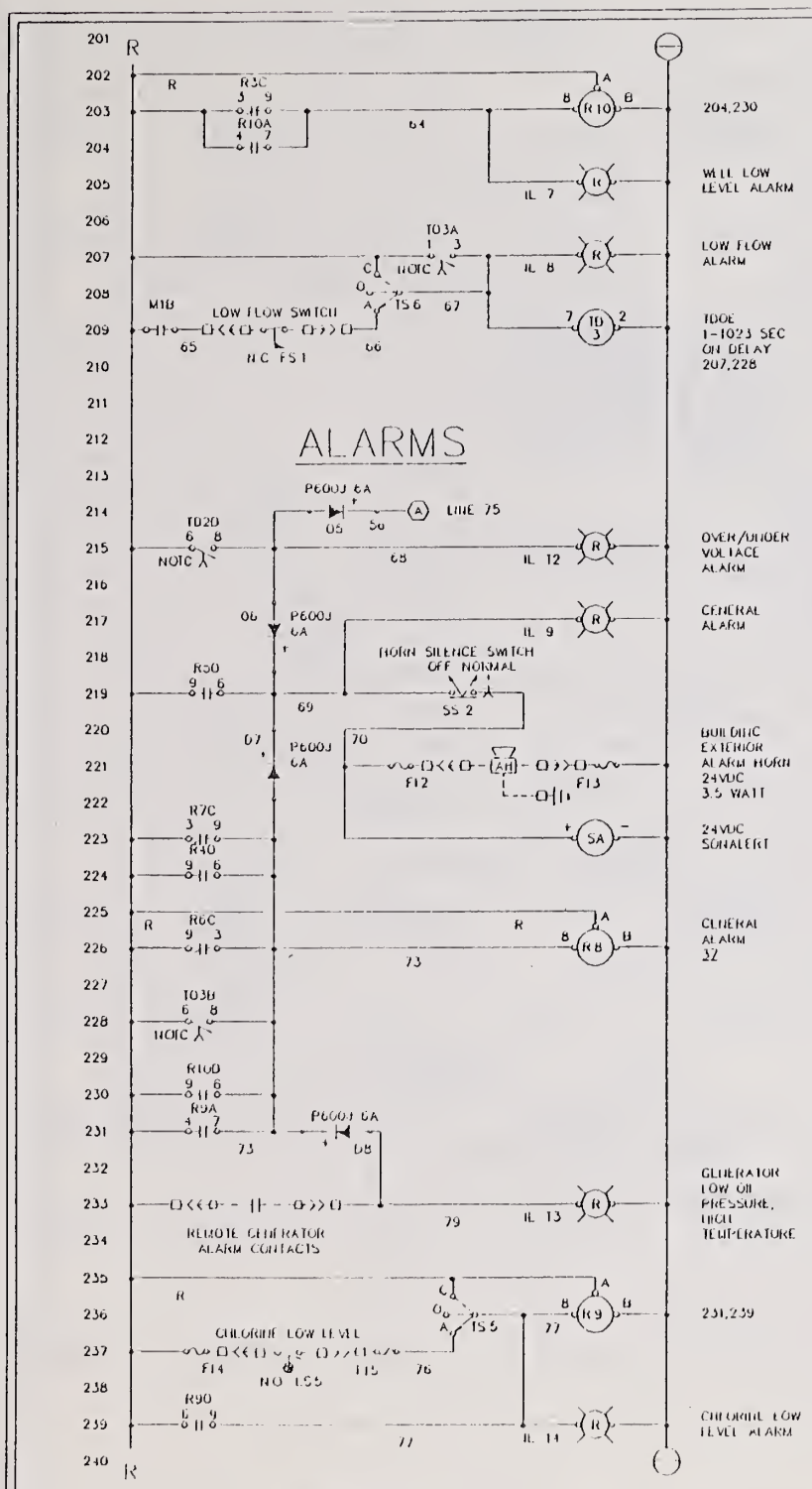
DRAWN		DATE
DESIGNED		DATE
CHECKED		DATE
APPROVED		DATE

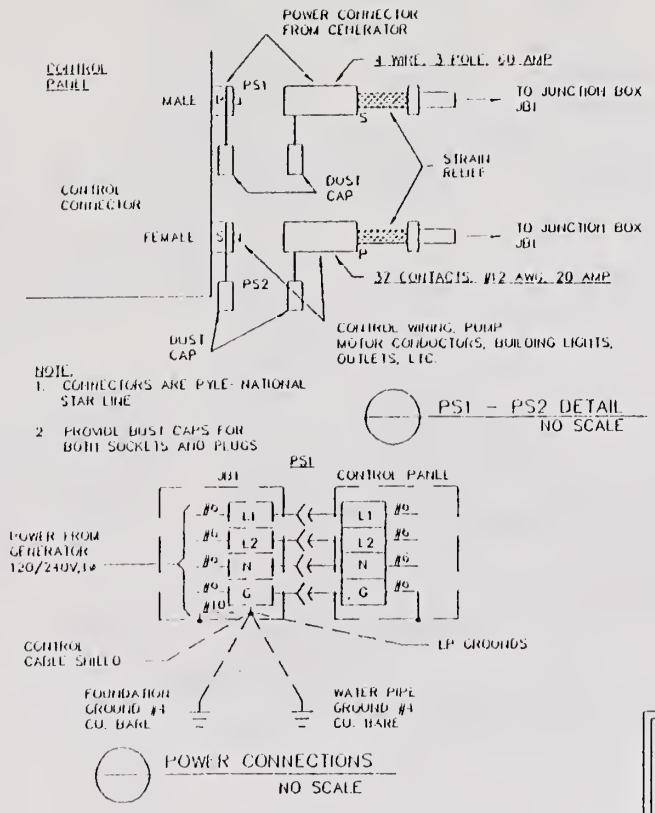
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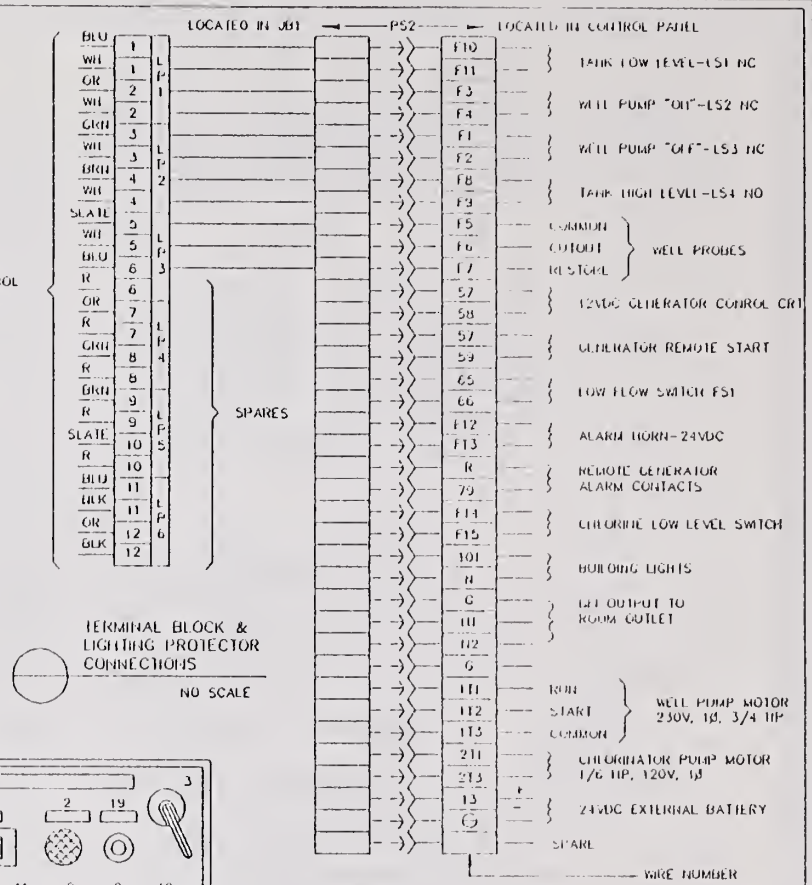
TANK DIAGRAM

SHT

OF



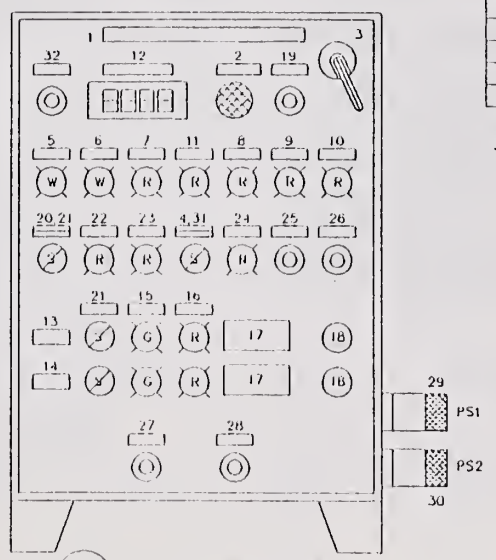


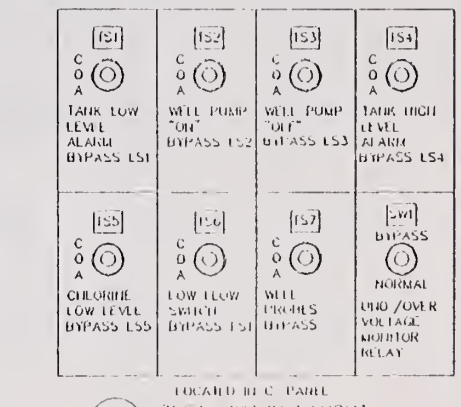


NAMEPLATE / EQUIPMENT	
CODE	DESIGNATION
1	
2	SONALERT
3	MAIN BREAKER DOOR INTERLOCK
4	HORN SILENCE
5	GENERATOR "ON"
6	D.C. POWER "ON"
7	WELL LOW LEVEL
8	LOW LEVEL
9	OVER/UNDER VOLTAGE
10	CHLORINE LEVEL LOW
11	GENERAL ALARM
12	DIGITAL VOLTMETER
13	WELL PUMP
14	CHLORINATOR PUMP
15	RUN

NAMEPLATE / EQUIPMENT	
CODE	DESIGNATION
16	OVERLOAD
17	OPERATIONS COUNTER
18	RUNNING TIME METER
19	ALARM RESET
20	GENERATOR START
21	HAND-OFF-AUTO
22	GENERATOR OIL PRESS / HIGH TEMPERATURE
23	TANK LOW LEVEL
24	TANK HIGH LEVEL
25	MANUAL PUMP "ON"
26	MANUAL PUMP "OFF"
27	WELL PUMP OL RESET
28	CHLORINE OL RESET
29	4-PIN PYLE-NAT PLUG SOCKET, NEMA 4,20 AMP
30	37 PIN PYLE-NAT PLUG/SOCKET,NEMA 4,20 AMP
31	OFF-ON
32	VOLTMETER POST

FRONT PANEL LAYOUT
NAMEPLATE / EQUIPMENT LEGEND





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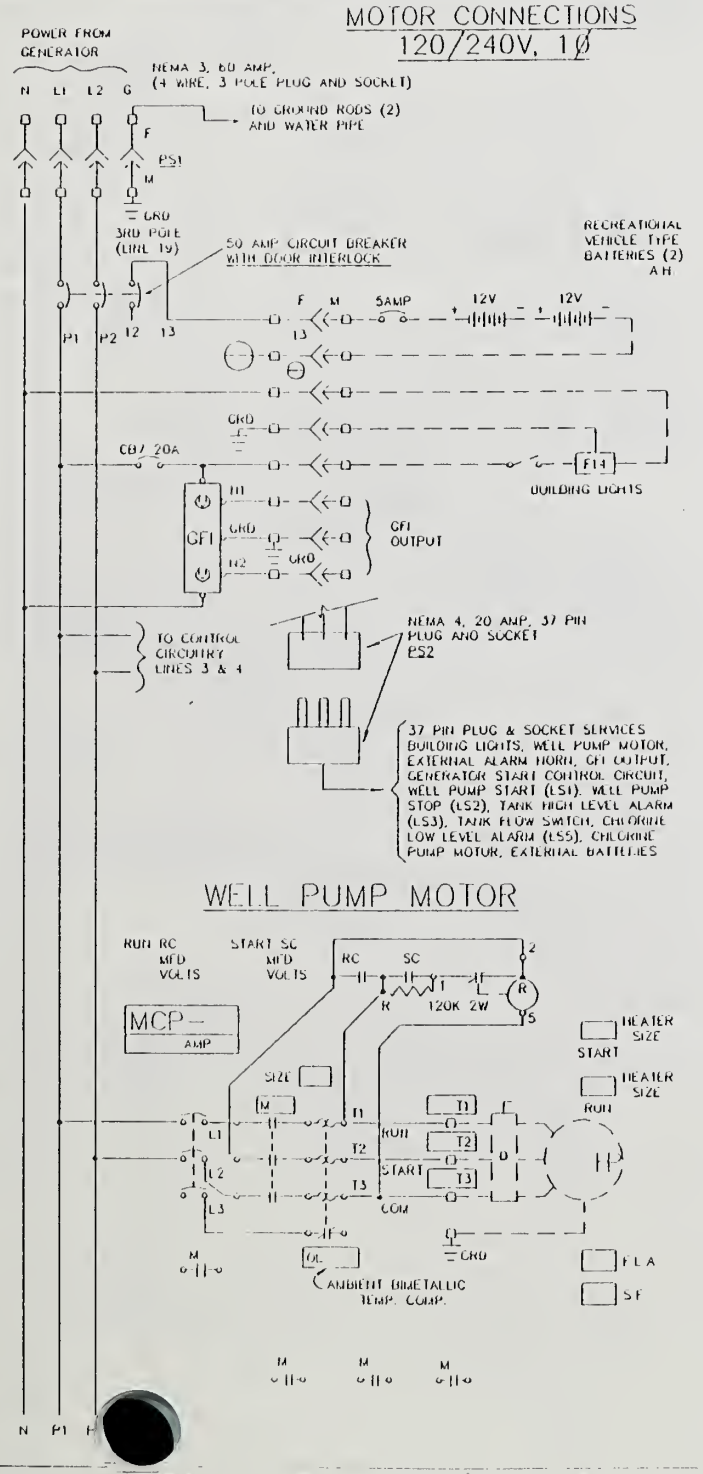
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION
DRAWN DATE
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

D.C. WELL PUMP TO TANK LADDER SCHEMATIC DIAGRAM AND DETAILS

SHT OF

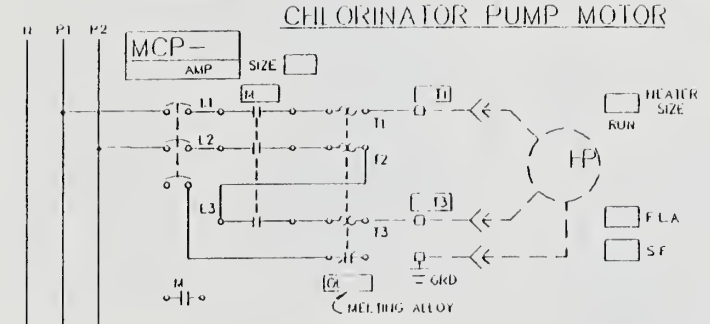
ELECTRICAL DETAILS

MOTOR CONNECTIONS
120/240V, 1Ø

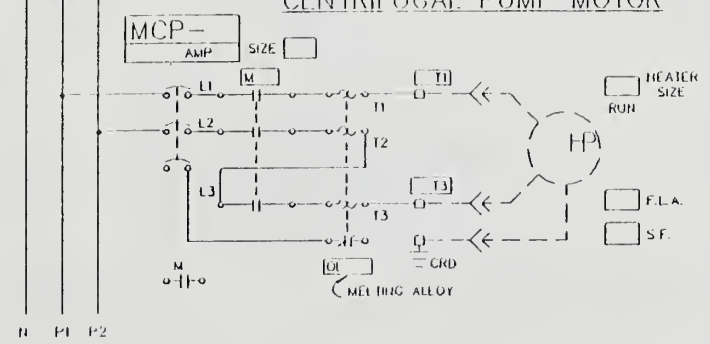


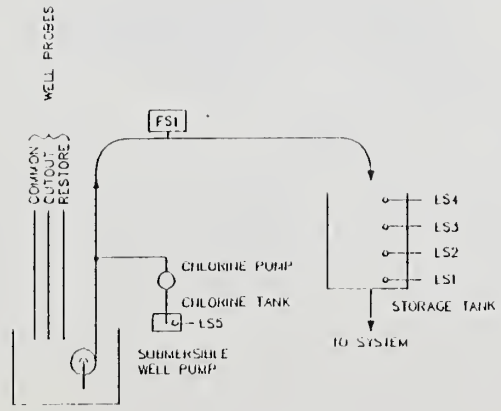
WELL PUMP MOTOR

CHLORINATOR PUMP MOTOR



CENTRIFUGAL PUMP MOTOR





SWITCH	FUNCTION
FS1	WELL FLOW FLOW
LS2	WELL PUMP ON
LS3	WELL PUMP OFF
LS4	TANK HIGH LEVEL ALARM
LS1	TANK LOW LEVEL ALARM
LS5	CHLORINE LOW LEVEL ALARM

WIRE SIZES & COLOR CODE

COLOR CODE
DC +RED -BLUE
24VAC YELLOW, COMMON WHITE

POWER WIRING 115VAC AND ABOVE
L1 BLACK
L2 VIOLET (240VAC WILD LEG ORANGE)
L3 BROWN
NEUTRAL GREY
GROUND, ALL VOLTAGES, GREEN

*UTILIZE ORANGE POWER WIRE ON 120V/240V DELTA SYSTEMS

WIRE SIZE
CONTROL WIRE 14AWG MINIMUM

POWER WIRE

TO AND FROM STARTERS

STARTER SIZE	1	2	3	4
WIRE SIZE (AWG)	10	8	3	1

FROM MAIN CIRCUIT BREAKER

60 AMPS	*4 AWG
25-30	*10
15-20	*14
10	*14
5	*14

FIELD WIRE SIZE	TERMINAL
24 - 19 AWG	BUCHANAN #0241
18 - 6 AWG	BUCHANAN #0243
4 - 1 AWG	BUCHANAN #824
#1/0 - UP	BUCHANAN #417

H.P.	MCP AMPS	#2 HEATER (START)	#1 & #3 HEATER (RUN)	SCot	RCot	F.L.A.
1/3	7	K29	K29	53 220V	-	3.5
1/2	15	K34	K31	71 220V	-	4.8
3/4	15	K39	K39	103 220V	-	6.4
1	15	K43	K43	126 220V	-	8
1 1/2	15	K23	K49	126 220V	10 370V	9.2
2	30	K28	K50	126 220V	20 370V	10
3	30	K37	K56	250 220V	35 370V	14
5	50	K50	K63	259 220V	15 (1) 370V	23

230V, 1Ø SUBMERSIBLE WELL PUMP MOTORS

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REVISED 9-28-87

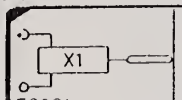
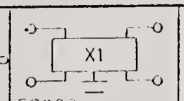
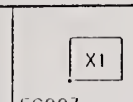
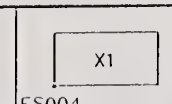
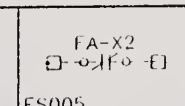
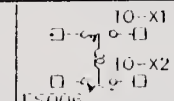
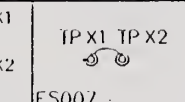
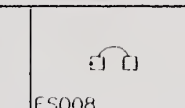
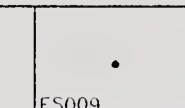
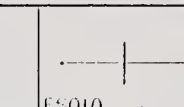
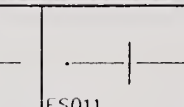
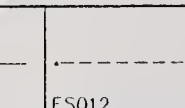
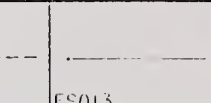
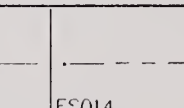
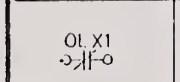
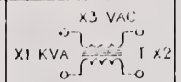
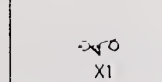
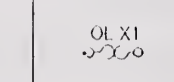
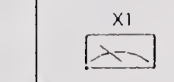
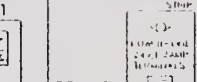
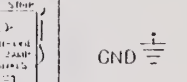
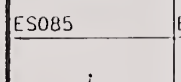
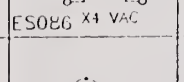
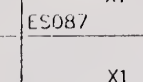
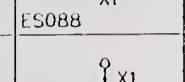
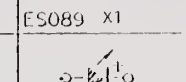
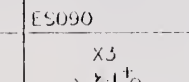
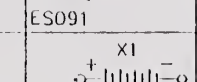
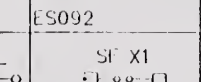
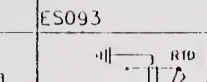
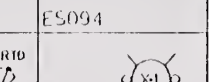
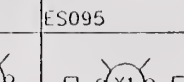
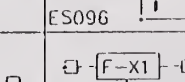
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

DRAWN DATE
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

DC WELL PUMP MOTOR DIAGRAM

SHT OF

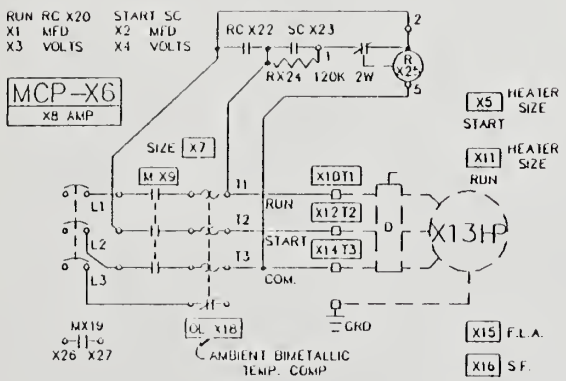
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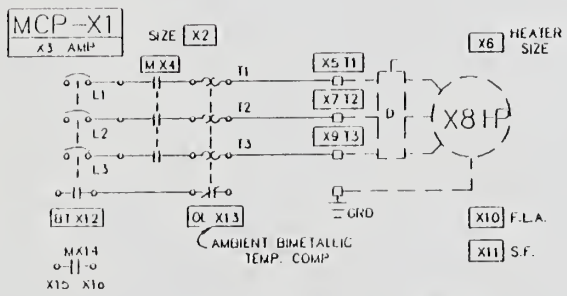
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION
DRAWN Snyder DATE
DESIGNED Snyder DATE
CHECKED DATE
REVIEWED DATE

STANDARD
CONTROLS SYMBOLS
ES001 - ES168
SHT
OF

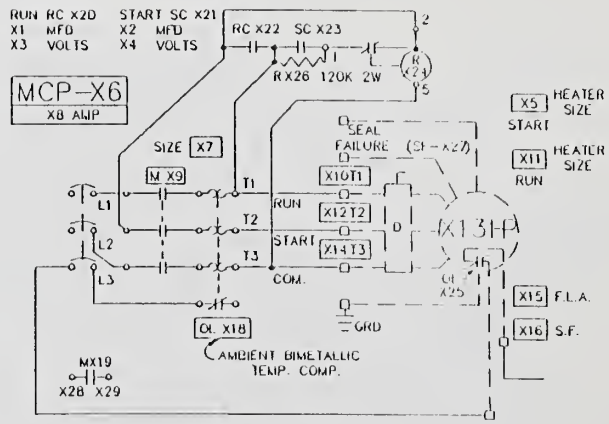
ELECTRICAL DETAILS



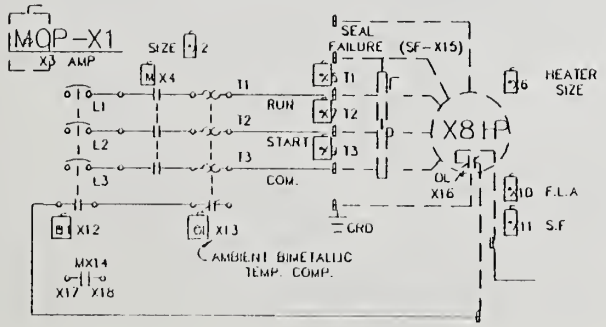
ES500 APR 24, 1987



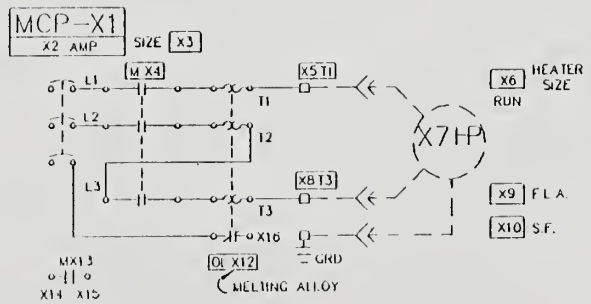
ES501 APR 24, 1987



ES502 APR 24, 1987



ES503 APR 24, 1987



ES504 APR 24, 1987

E0001300
REV.9-28-87

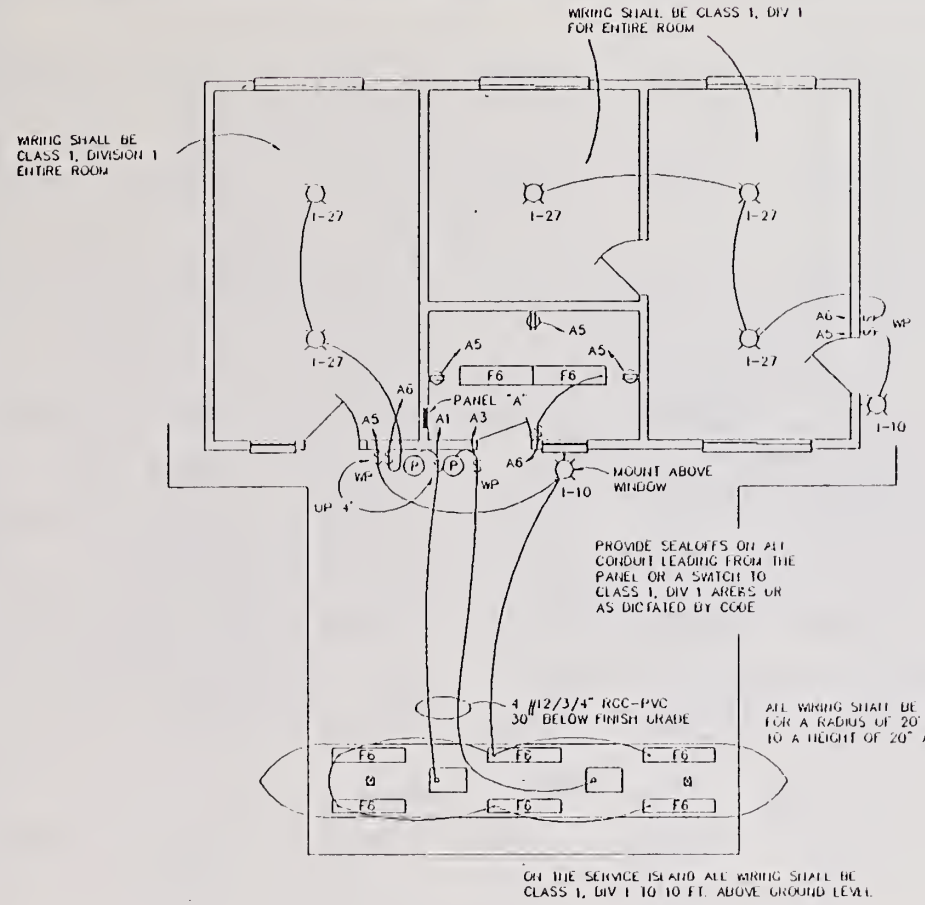
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THE PACIFIC NORTHWEST REGION

DRAWN DATE
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

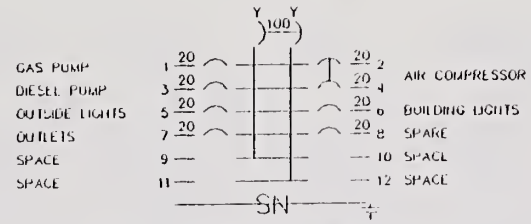
MOTOR DWG SHEET

SHT OF



FLOOR PLAN

PANEL "A"

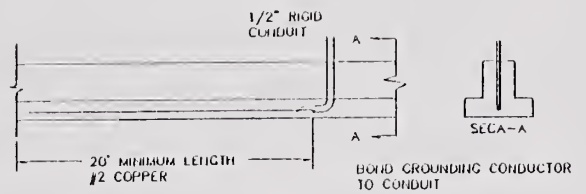


120/240 V, 1Ø, 3 WIRE, SOLID NEUTRAL, CLASS 1
100 AMP PANEL, WITH 100 A MAIN BREAKER, 20 POLE

LEGEND

NOTE: FIXTURES SHALL BE AS LISTED OR APPROVED EQUAL

- DUPLEX GROUNDABLE OUTLET UP 2'-0"
- (P) PUMP DISCONNECT SWITCH, 2 POLE SWITCHES BOTH HOT AND NEUTRAL CONDUCTORS, NONARCING
- LIGHTING SWITCH, 2 POLE SWITCHES, BOTH HOT AND NEUTRAL CONDUCTORS, NON-ARCING
- F-6 FLOURESCENT FIXTURE
- I-27 INCANDESCENT FIXTURE, EXPLOSION PROOF
- I-10 WEATHERPROOF LAMP HOLDER AND LAMP

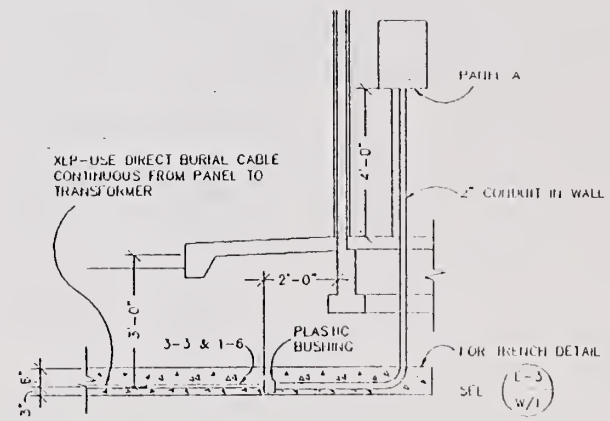


(A/4) CONCRETE FOUNDATION GROUNDING

NO SCALE

NOTES

1. ALL WIRING SHALL BE IN ACCORDANCE WITH NEC, STATE AND LOCAL CODES
2. PROVIDE SEALOFFS WHERE REQUIRED BY CODE.
3. ALL CONDUCTORS BELOW GRADE SHALL BE TYPE XLP-USE IN RGC PVC CONDUIT.
4. ALL WIRING SHALL BE IN RIGID CONDUIT.



(B/4) UNDERGROUND SERVICE ENTRANCE

NO SCALE

E0001700
REV 9-28-87

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GAS & OIL STORAGE BLDG. 556

SHEET ___ OF ___

ELECTRICAL DETAILS

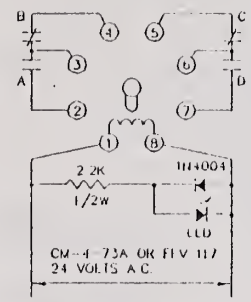
$_{TS-X1}$ ES201	$ ES202	$_{2RC}$ ES203	$_{3}$ ES204	$_{WP}$ ES205	(P) $ ES206	(P) $_{3}$ ES207	$_{RC}$ ES208	$_{EP}$ ES209	$_{OL-X1}$ ES210	ES211	$_{WP}$ ES212	ES213	$_{WP\ SP}$ ES214
$_{SP}$ ES215	ES216	ES217	ES218	SP ES219	ES220	ES221	(X) ES222	$_{X1}$ ES223	US ES224	UP ES225	OS ES226	OP ES227	UT ES228
OT ES229	ES230	UC ES231	ES232	ES233	ES234	A-2 ES235	X1 ES236	X1/X2 ES237	G.E.P. ES238	G ES239	G ES240	ES241	ES242
L ES243	ES244	ES245	ES246	13.25 x 13.5 X2 X1 ES247	D ES248	M ES249	12X24 X1 ES250	12X10 X1 ES251	15X34.5 X1 ES252	12X34.5 X1 ES253	12X48 X1 ES254	12X18 X1 ES255	18X18 X1 ES256
X1 18X30 ES257	24X24 X1 ES258	X1 ES259	X1 ES260	X1 ES261	X1 ES262	X1 ES263	X1 ES264	X1 ES265	X1 ES266	X1 ES267	4.5X48 F-X1 ES268	12X48 F-X1 ES269	24X48 F-X1 ES270
48X48 F-X1 ES271	9X48 F-X1 ES272	9X48 F-X1 ES273	7.5X48 F-X1 ES274	10X96 F-X1 ES275	F-X1 ES276	F-X1 ES277	P E-X1 ES278	A E-X1 ES279	E-X1 ES280	S E-X1 ES281	R I-X1 ES282	I-X1 ES283	ES284
I-X1 ES285	I-X1 ES286	MH-X1 ES287	MH-X1 ES288	HPS-X1 ES289	HPS-X1 ES290	ES291	ES292	ES293	I-X1 ES294	I-X1 ES295	I-X1 ES296	I-X1 ES297	X1 I-X2 ES298
I-X1 ES299	X1 E-X2 ES300	F ES301	F E-X1 ES302	S X1 ES303	ES304	F ES305	F ES306	R ES307	F ES308	X1 X2 ES309	E-X1 ES310	E-X1 ES311	E-X1 ES312
E-X1 ES313	H-X1 X2 ES314	WH X1 ES315	HP-X1 ES316	AH-X1 ES317	AC-X1 ES318	CB-X1 ES319	CP ES320	HL-X1 ES321	UC-X1 ES322	CH-X1 ES323	DTFD-X1 ES324	X1 ES325	X1 ES326
X1 ES327	TAS-X1 ES328	N.C. TAS-X1 ES329	N.O. TAS-X1 ES330	MS X1 ES331	X1 ES332	G ES333	ES334	G.F.P. ES335	ES336	N.I.C. ES337	ES338	ES339	ES340
ES341	ES342	ES343	ES344	ES345	ES346	ES347	ES348	ES349	ES350	ES351	ES352	ES353	ES354
ES355	ES356	ES357	ES358	ES359	ES360	ES361	ES362	ES363	ES364	ES365	ES366	ES367	ES368

E0001800
REV.9-28-87

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REVIEWED DATE

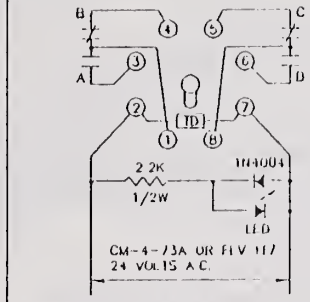
STANDARD
ELECTRICAL SYMBOLS

ES201 ES368 SHT OF



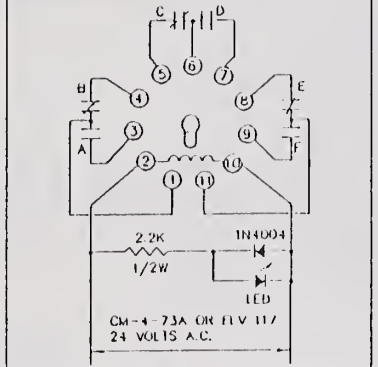
WIRING DIAGRAM FOR HERMETICALLY SEALED 8-PIN OCTAL BASE PLUG-IN SEQUENCE RELAY (ALTERNATOR RELAY)

ALTERNATOR RELAY ES505



WIRING DIAGRAM FOR 8-PIN OCTAL BASE PLUG-IN SOLID STATE TIMER ENCLOSED PLASTIC DUST COVER

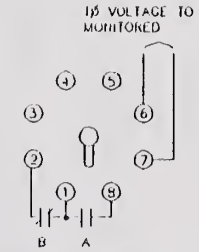
ONE SHOT/OFF DELAY/ON DELAY TIME DELAY RELAY ES506



WIRING DIAGRAM FOR 11-PIN HERMETICALLY SEALED GENERAL PURPOSE 3PDT PLUG-IN CONTROL RELAY.

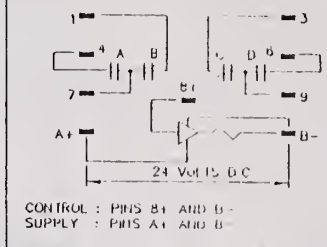
SPDT TIME DELAY & GENERAL PURPOSE RELAY

ES507



WIRING DIAGRAM FOR OVER/UNDER VOLTAGE RELAY.
ENCLOSED IN PLASTIC DUST COVER, INDUSTRIAL PLUG-IN TYPE

OVER/UNDER VOLTAGE MONITOR RELAY ES508



CONTROL : PINS B+ AND B-
SUPPLY : PINS A+ AND B-

WIRING DIAGRAM FOR SOLID STATE AMPLIFIER DRIVEN GENERAL PURPOSE RELAY. ENCLOSED PLASTIC DUST COVER.

NOTE: SPECIAL PLUG-IN BASE REQUIRED FOR THIS TYPE OF RELAY.

AMPLIFIER RELAY ES509

F0001900
REV.9-29-87

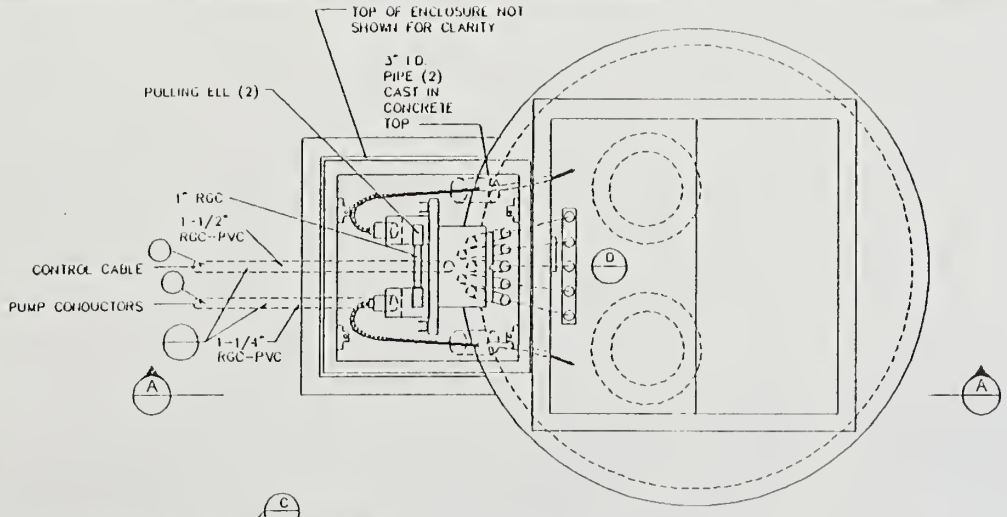
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DESIGNED DATE
CHECKED DATE
REVISED DATE

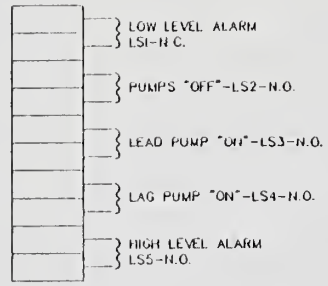
SHT
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ELECTRICAL DETAILS



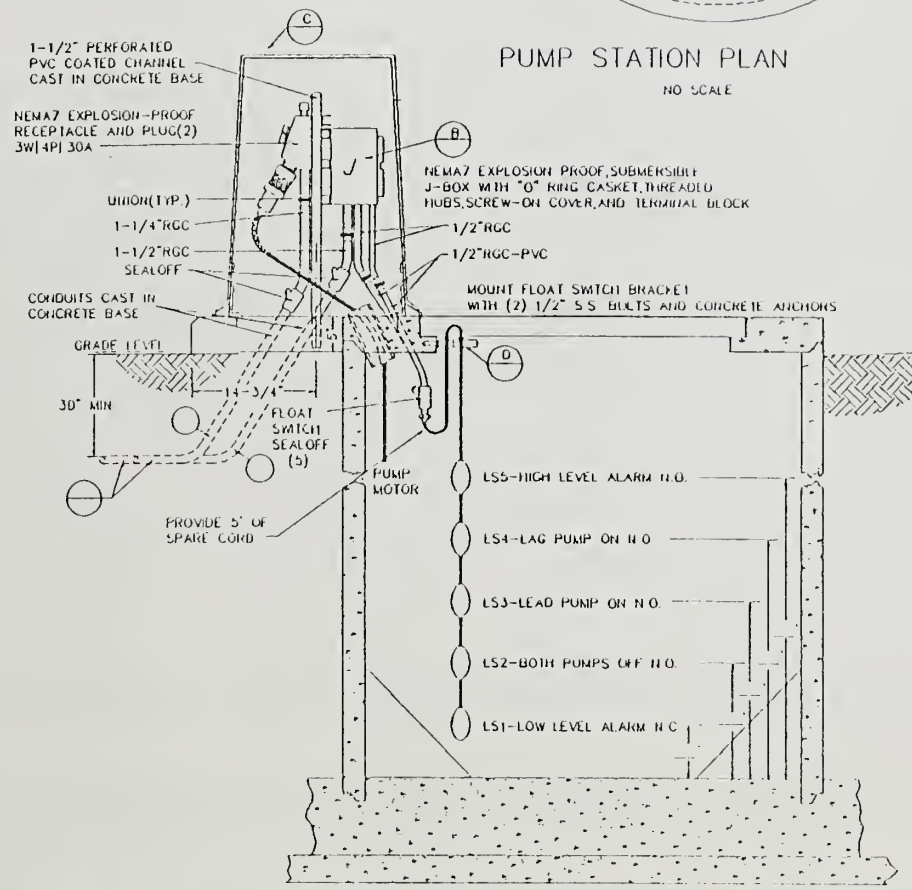
PUMP STATION PLAN

NO SCALE



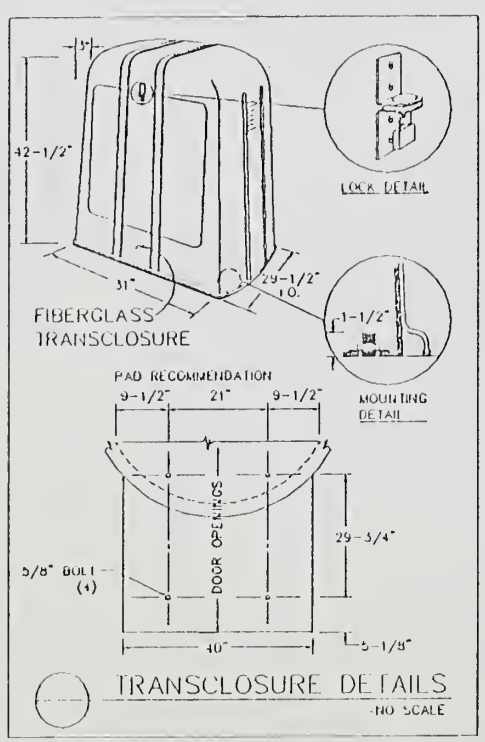
B TERMINAL BLOCK CONNECTIONS

NO SCALE



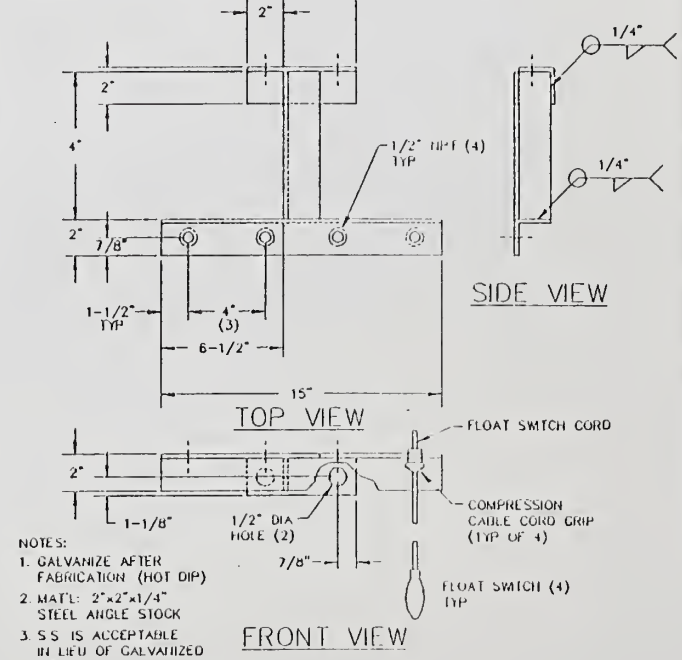
A SECTION A-A

NO SCALE



TRANSCLOSURE DETAILS

NO SCALE



NOTES:
1. GALVANIZE AFTER FABRICATION (HOT DIP)
2. MATL: 2"x2"x1/4" STEEL ANGLE STOCK
3. S.S. IS ACCEPTABLE IN LIEU OF GALVANIZED STEEL.

A FLOAT SWITCH CORD SUPPORT BRACKET

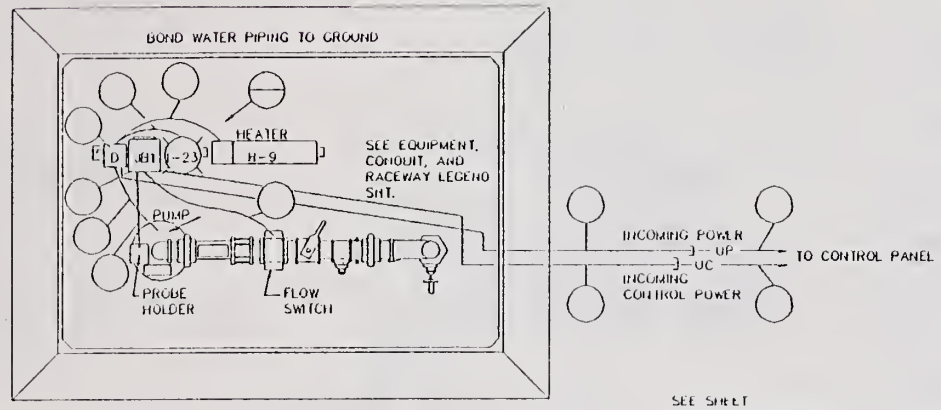
NO SCALE EDOD0042 FEB. 14, 1986

E0002000
DATE: SEPT 23 1985
REV.9-29-87

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FOREST SERVICE
THE PACIFIC NORTHWEST REGION
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RELEASED ____ DATE

DUPLEX ELECTRIC

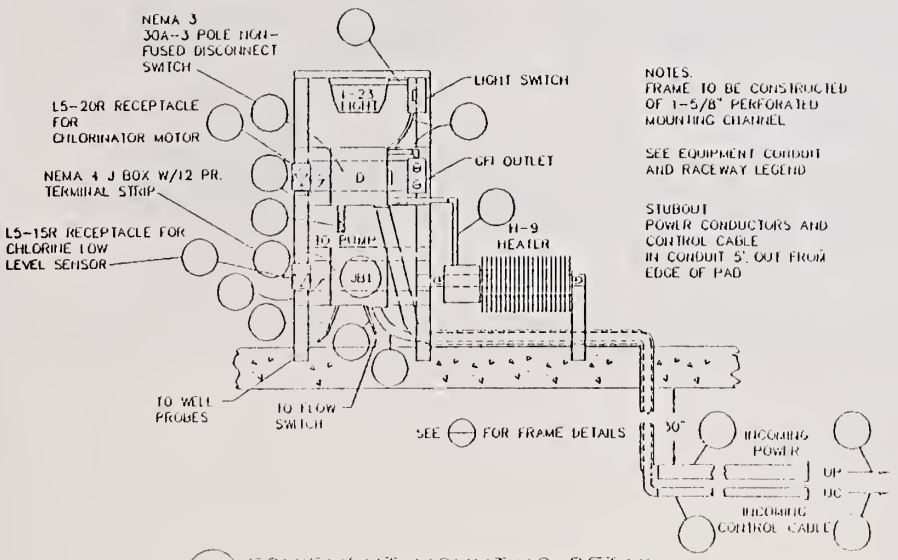
STATION 1 | SHT. | OF



SEE SHEET FOR NON-ELECTRICAL ENCLOSURE DETAILS

WELL ENCLOSURE PAD

NO SCALE



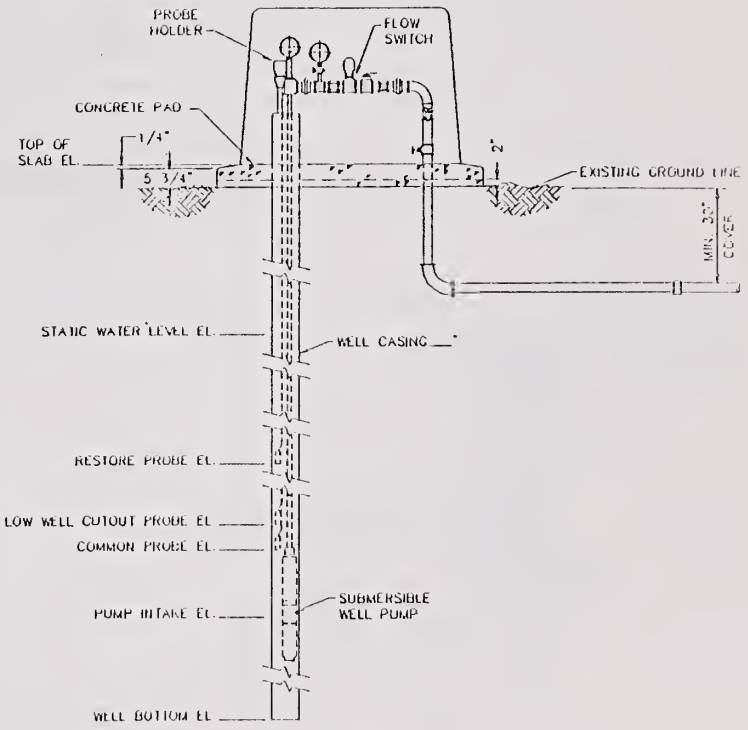
NOTES:
FRAME TO BE CONSTRUCTED OF 1-5/8" PERFORATED MOUNTING CHANNEL

SEE EQUIPMENT CONDUIT AND RACEWAY LEGEND

STUBOUT POWER CONDUCTORS AND CONTROL CABLE IN CONDUIT 5' OUT FROM EDGE OF PAD

EQUIPMENT MOUNTING DETAIL

NO SCALE



WELL SECTION

NO SCALE

L0002100
11/25/86

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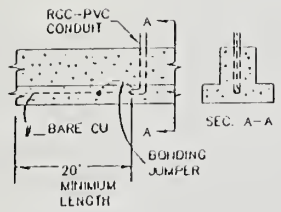
THE PACIFIC NORTHWEST REGION

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DESIGNED ____ DATE ____
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REVIEWED ____ DATE ____

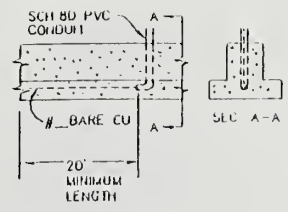
WELL ELECTRICAL PLAN AND DETAILS

SHT 7 OF 15

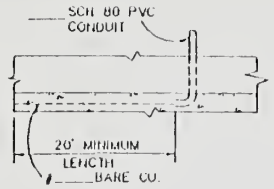
ELECTRICAL DETAILS



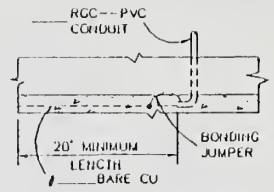
CONCRETE FOUNDATION GROUNDING NO SCALE ED000011 11 OCT 85



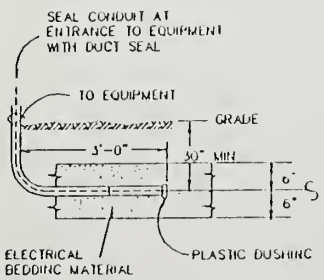
CONCRETE FOUNDATION GROUNDING NO SCALE ED000012 11 OCT 85



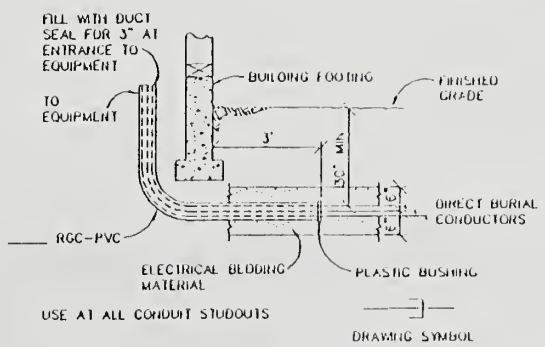
CONCRETE SLAB GROUNDING NO SCALE ED000013 11 OCT 85



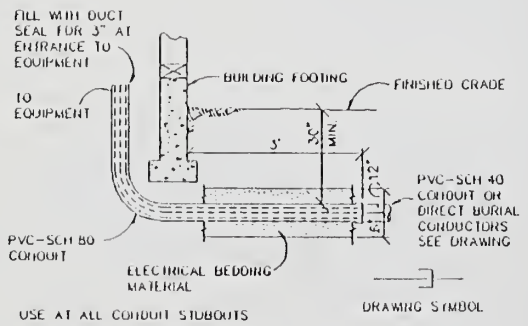
CONCRETE SLAB GROUNDING NO SCALE ED000014 11 OCT 85



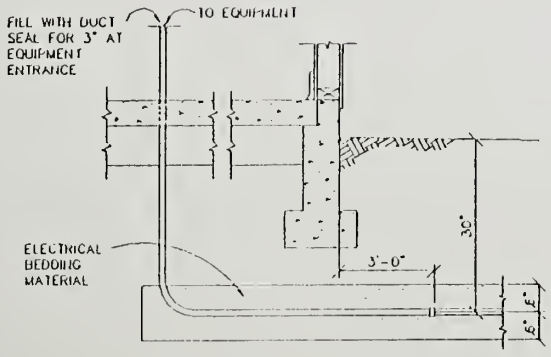
CONDUIT STUBOUT DETAIL NO SCALE ED000015 11 OCT 85



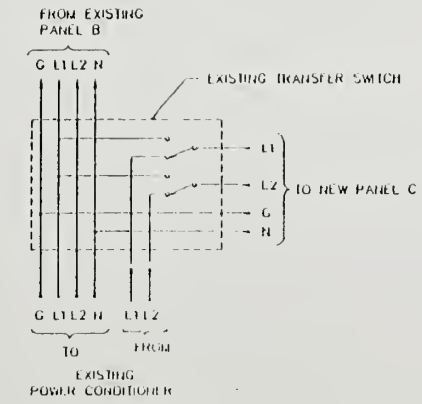
CONDUIT STUBOUT NO SCALE ED000016 11 OCT 85



CONDUIT STUBOUT NO SCALE ED000017 11 OCT 85



CONDUIT STUBOUT NO SCALE ED000018 11 OCT 85



TRANSFER SWITCH ED000060 2/25/88

E0002500
11 OCT 85
REV 9-30-87

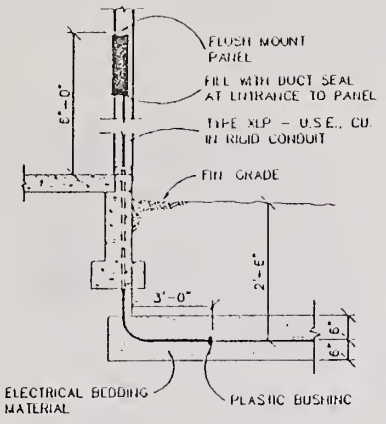
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CHECKED		DATE
REVIEWED		DATE

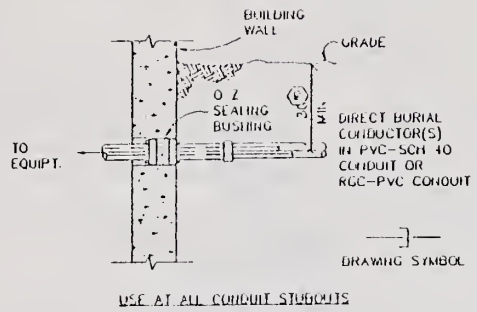
ED000011-ED000018
ED000060

SHT
OF



CONDUIT STUBOUT

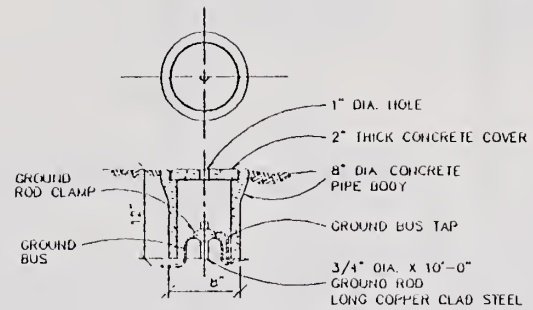
NO SCALE ED000019 11 OCT 85



USE AT ALL CONDUIT STUBOUTS

CONDUIT WALL & STUBOUT SEAL

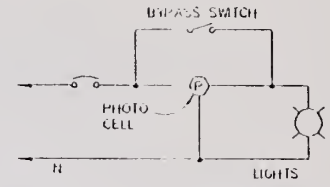
NO SCALE ED000020 11 OCT 85



GROUND ROD INSTALLATION

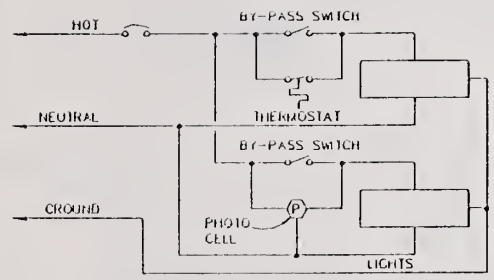
GROUND ROD DETAIL

NO SCALE ED000021 11 OCT 85



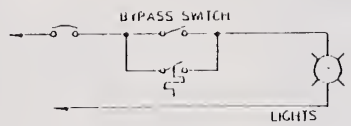
PHOTOCELL CELL BYPASS SWITCH

NO SCALE ED000022 11 OCT 85



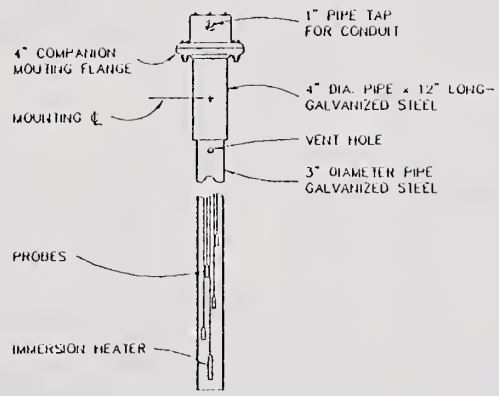
PHOTOCELL & THERMOSTAT CONNECTION DETAILS

NO SCALE ED000023 11 OCT 85



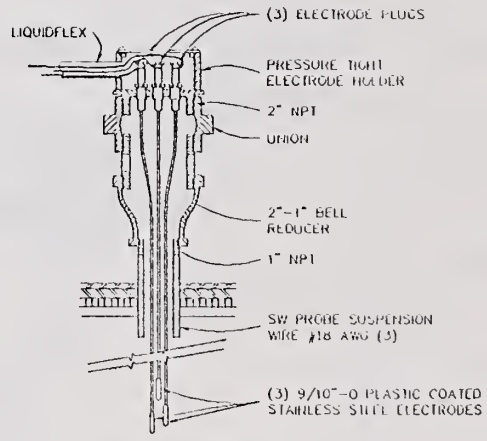
THERMOSTAT BYPASS SWITCH

NO SCALE ED000024 2 OCT 85



PROBE DETAIL

NO SCALE ED000025 6 OCT 85



PROBE HOLDER

NO SCALE ED000026 6 OCT 85

ED002600
11 OCT 85
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FOREST SERVICE

THE PACIFIC NORTHWEST REGION

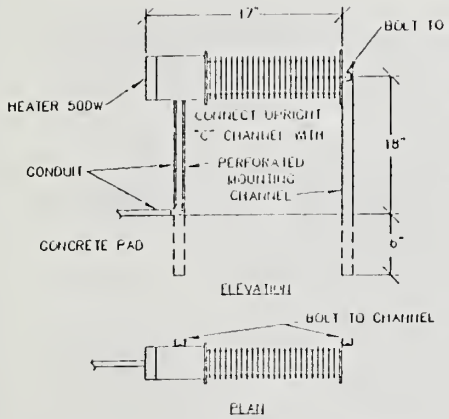
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CHECKED DATE
REVIEWED DATE

ED000019-ED000026

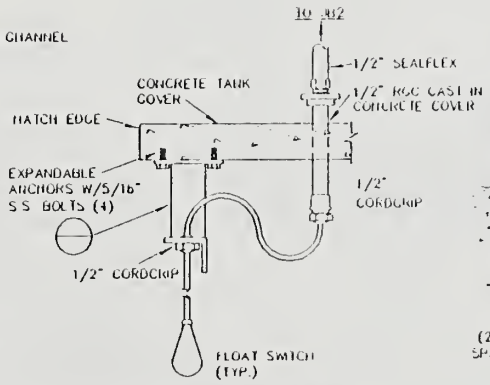
DETAILS

SHT. OF

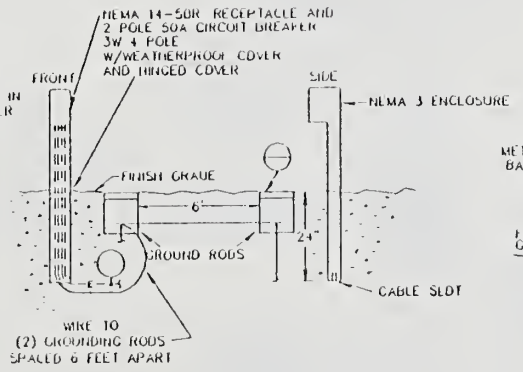
ELECTRICAL DETAILS



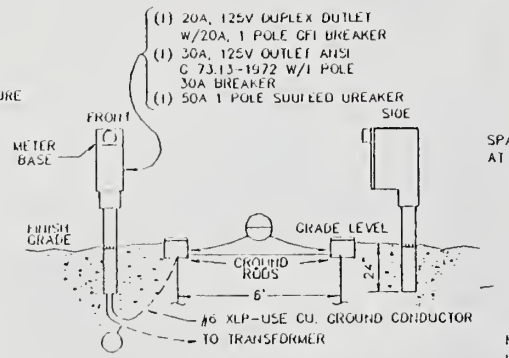
HEATER MOUNTING DETAIL
NO SCALE ED000027



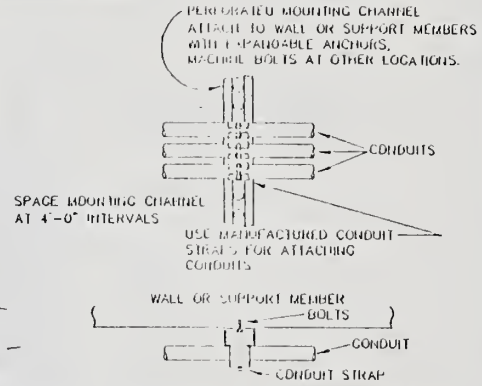
FLOAT SWITCH MOUNTING DETAIL
NO SCALE ED000030



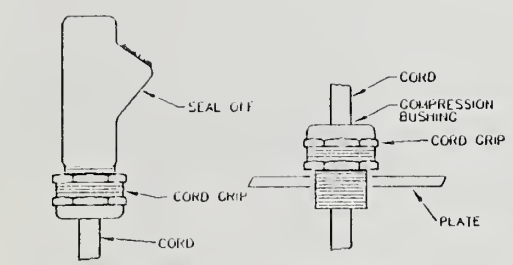
POWER PEDESTAL DETAIL
NO SCALE ED000033



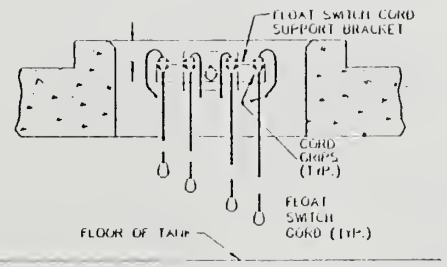
TRAILER POWER PEDESTAL
NO SCALE ED000036



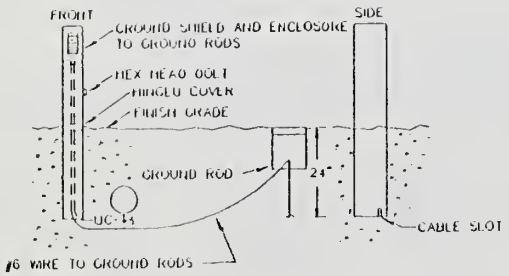
CONDUIT MOUNTING DETAIL
USE IN AREAS WHERE TWO OR MORE CONDUITS RUN PARALLEL
NO SCALE ED000039



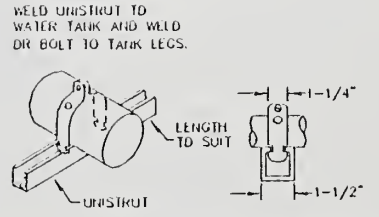
COMPRESSION CABLE CORD GRIP & SEALOFF DETAIL
NO SCALE ED000028



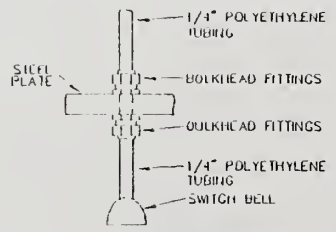
FLOAT SWITCH MOUNTING DETAIL
NO SCALE ED000031



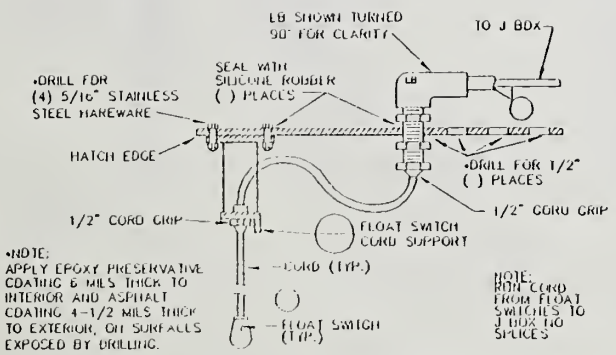
CONTROL CABLE PEDESTAL DETAIL
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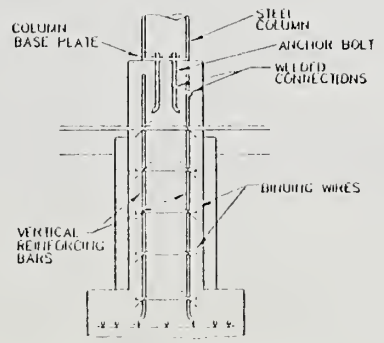
CONDUIT SUPPORT DETAIL
NO SCALE ED000037



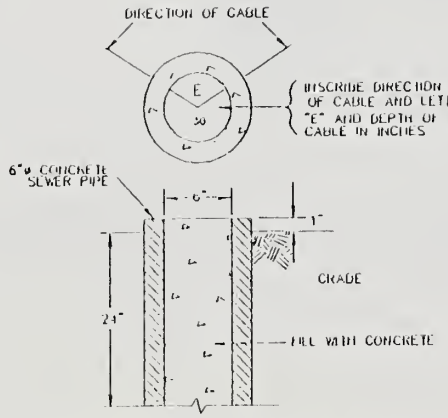
(TYP.) BELL SWITCH MOUNTING DETAIL
NO SCALE ED000040



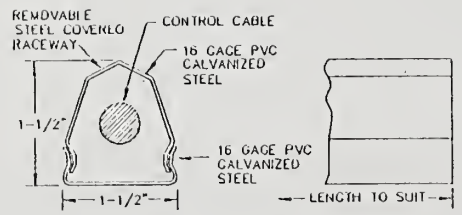
FLOAT SWITCH MOUNTING DETAIL
NO SCALE ED000029



EQUIPMENT GROUNDING
NO SCALE ED000032



ELECTRICAL CABLE MARKER DETAIL
NO SCALE ED000035



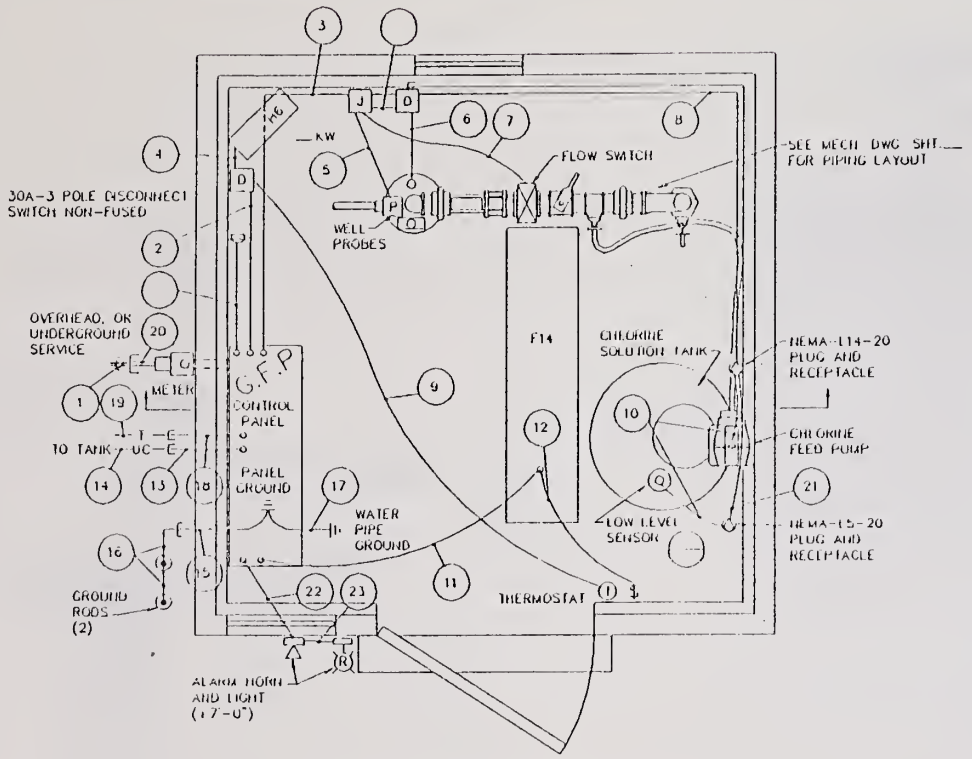
SNAP TOGETHER RACEWAY
NO SCALE ED000038

E0002700
MARCH 1,1986
REV 9-30-87

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION
DRAWN DATE
DESIGNED DATE
CHECKED DATE
APPROVED DATE

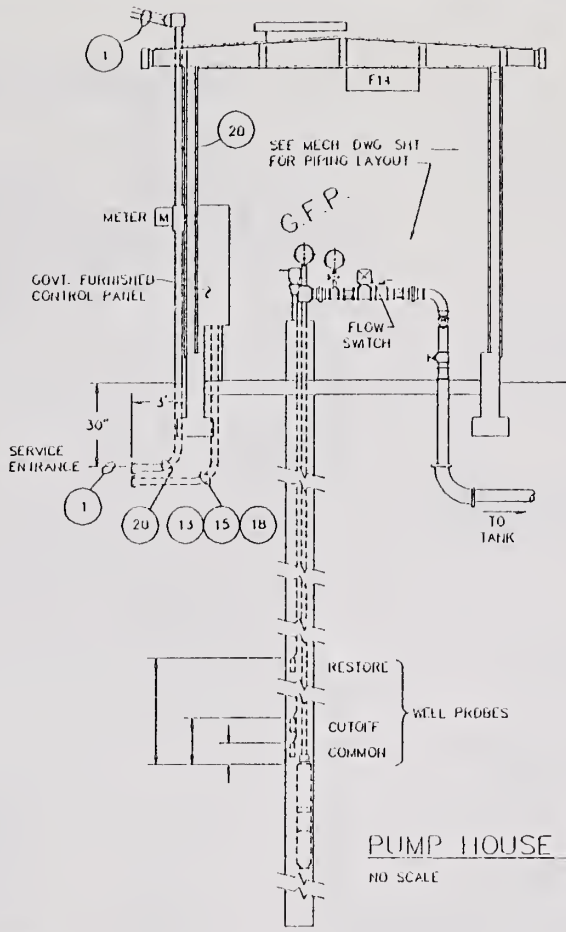
ED000027-ED000040

SHT.
OF



PUMP HOUSE - PLAN VIEW

NO SCALE



PUMP HOUSE - ELEVATION VIEW

NO SCALE

ELECTRICAL EQUIPMENT LEGEND

	ALARM HORN
O	CHLORINE LOW LEVEL SENSOR
	CONDUIT STUBOUT WITH SEALING GLAND
	FLOW SWITCH
F14	FLUORESCENT LIGHT
G.F.P.	GOVERNMENT FURNISHED PROPERTY
⏚	GROUND
⏚	GROUND ROD
H6	HEATER
J	JUNCTION BOX
	OUTSIDE RED ALARM LIGHT
	SPECIAL OUTLET
T	THERMOSTAT
	WALL SWITCH
P	WELL PROBES
-T-	UNDERGROUND TELEPHONE LINE
-UC-	UNDERGROUND CONTROL CABLE
	DUPLEX OUTLET
D	DISCONNECT SWITCH

CONDUIT AND RACEWAY LEGEND

CODE	NUMBER AND SIZE OF CONDUCTORS	SIZE OF RACEWAY	TYPE OF RACEWAY	TYPE OF INSULATION	REMARKS
1	#	--	--	--	SERVICE ENTRANCE CONDUCTORS
2	(3)#10	3/4"	IMC	THWN	UNIT HEATER DISCONNECT
3	(10)#12	--	IMC	THWN	WELL PUMP, PROBES, FLOW SWITCH, CHLORINE PUMP
	(4)#				AND LEVEL SENSOR
4	(3)#10	1/2"	SEAL-FLEX	THWN	UNIT HEATER
5	(3)#12	1/2"	SEAL-FLEX	THWN	WELL PROBES
6	(4)#	--	SEAL-FLEX	XLP	WELL PUMP
7	(2)#12	1/2"	SEAL-FLEX	THWN	FLOW SWITCH
8	(5)#12	3/4"	IMC	THWN	LOW LEVEL SENSOR, CHLORINE FEED PUMP
9	(2)#12	3/4"	IMC	THWN	UNIT HEATER THERMOSTAT
10	(3)#16	--	--	S.O.CORD	--
11	(3)#12	3/4"	IMC	THWN	ROOM LIGHT
12	(2)#12	3/4"	IMC	THWN	LIGHT SWITCH

CONDUIT AND RACEWAY LEGEND (CONTINUED)

CODE	NUMBER AND SIZE OF CONDUCTORS	SIZE OF RACEWAY	TYPE OF RACEWAY	TYPE OF INSULATION	REMARKS
13	(1)#2 PR #22	1-1/2"	RGC-PVC	PVC	STUB OUT FOR WATER TANK CONTROL CABLE
14	(1)#2 PR #22	--	DIRECT BURIAL	PVC	CONTROL CABLE TO WATER TANK
15	(1)#	1/2"	RGC-PVC	XLP-USE	STUBOUT TO GROUND RODS
16	(1)#	--	DIRECT BURIAL	XLP-USE	GROUND ROD CONDUCTOR
17	(1)#8 CU.	--	--	THWN	WATER PIPE GROUND
18	--	1/2"	RGC-PVC	--	STUBOUT FOR TELEPHONE LINE
19	--	--	--	--	TELEPHONE LINE
20	#	---	---	---	SERVICE ENTRANCE CONDUCTORS
21	(3)#12	3/4"	IMC	THWN	CHLORINE LOW LEVEL SENSOR
22	(5)#12	3/4"	IMC	THWN	ALARM HORN AND ALARM LIGHT
23	(3)#12	3/4"	IMC	THWN	ALARM LIGHT
24	(5)#12	3/4"	IMC	THWN	DUPLEX OUTLET
25	(4)#	---	IMC	THWN	DISCONNECT

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11/26/86
REV.10-1-87

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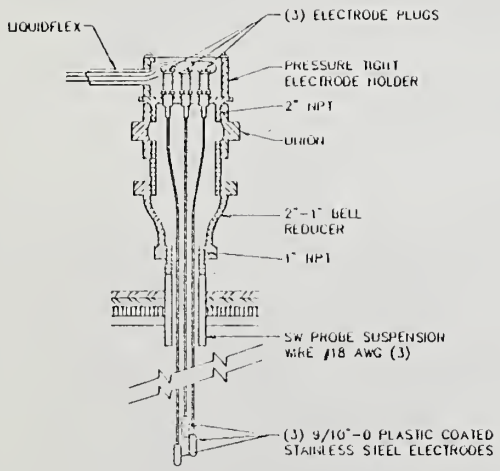
THE PACIFIC NORTHWEST REGION

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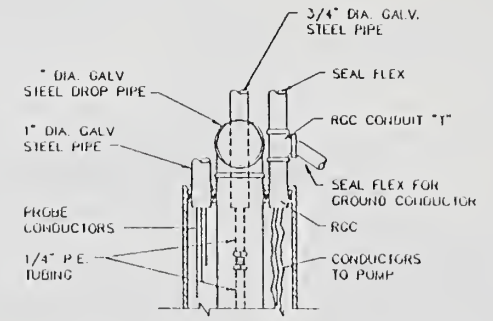
PUMP HOUSE
ELECTRICAL PLAN

SHT. 6
OF 15

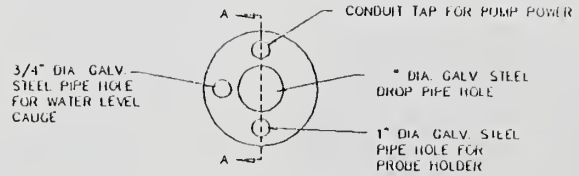
ELECTRICAL DETAILS



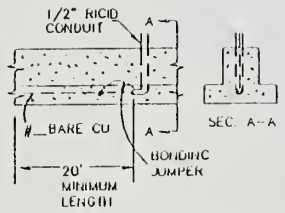
PROBE HOLDER
NO SCALE ED000026 6 OCT 86



SECTION A-A
NO SCALE



SANITARY WELL SEAL
NO SCALE 51-75A FEB. 14, 1986



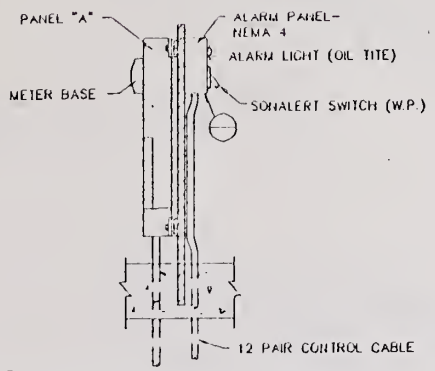
CONCRETE FOUNDATION GROUNDING
NO SCALE ED000011 11 OCT 85

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U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

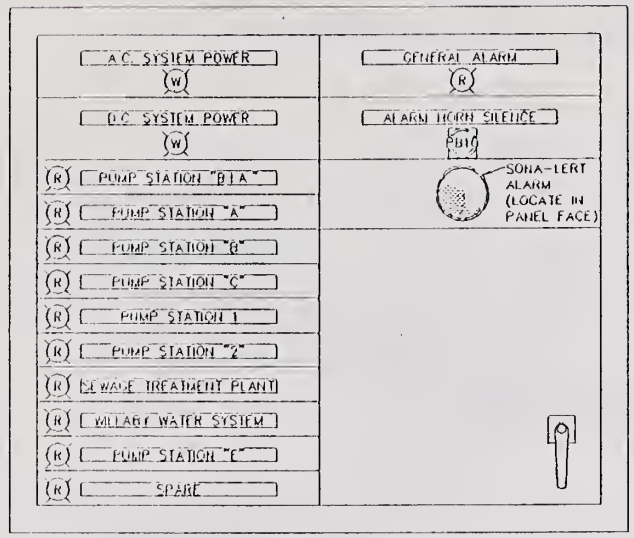
DRAWN		DATE
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CHECKED		DATE
REVISED		DATE

SHT 01 | 15



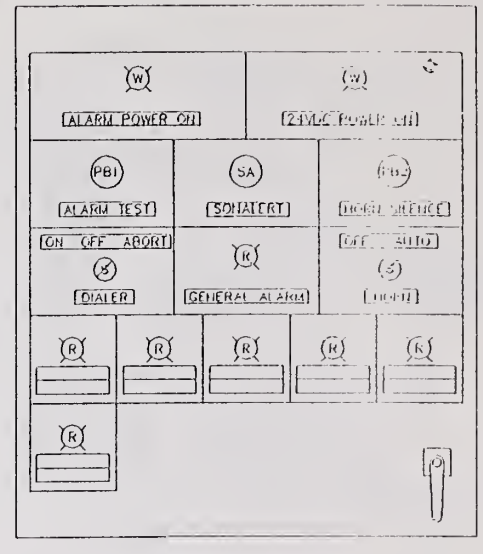
HOST TRAILER POWER PEDESTAL-SIDE VIEW

NO SCALE ED000126



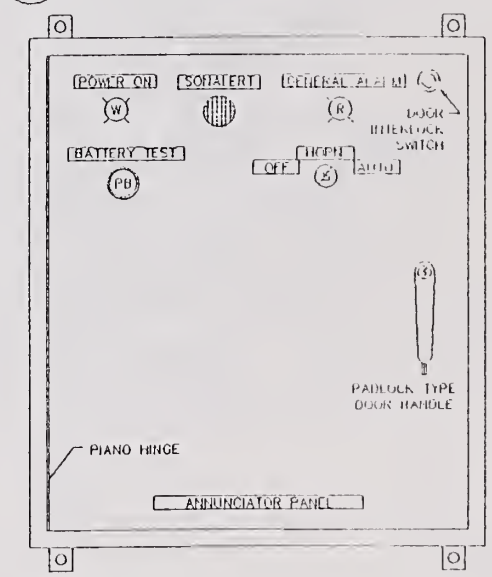
ANNUNCIATOR CONTROL ENCLOSURE

NO SCALE ED000102



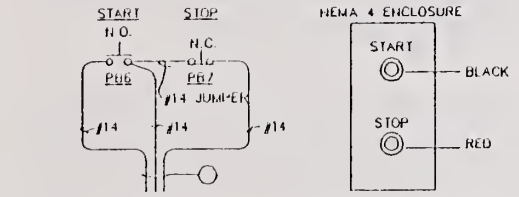
ANNUNCIATOR CONTROL ENCLOSURE

NO SCALE ED000099



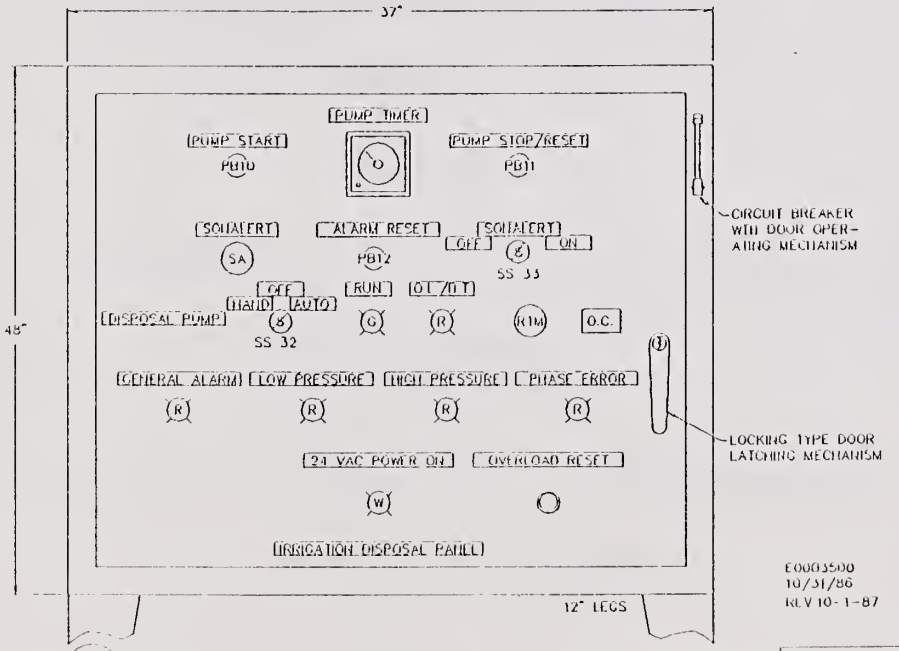
ANNUNCIATOR FRONT PANEL LAYOUT

NO SCALE ED000100



BACKWASH PUSHBUTTON WIRING

NO SCALE ED000129



NO SCALE ED000101

E0003500
10/31/86
REV 10-1-87

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

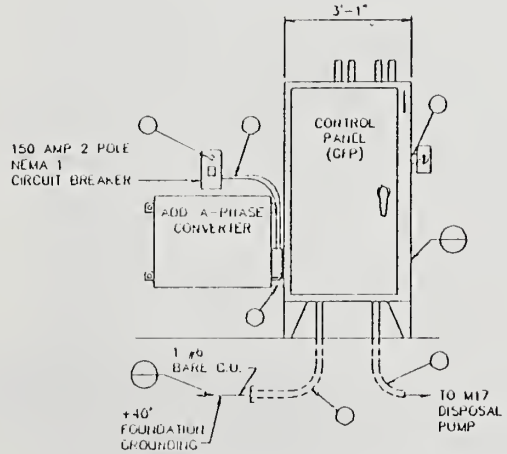
THE PACIFIC NORTHWEST REGION

DRAWN DATE
DESIGNED DATE
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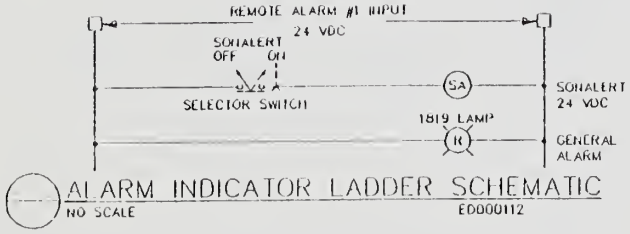
DETAILS

SHT. 3 OF 15

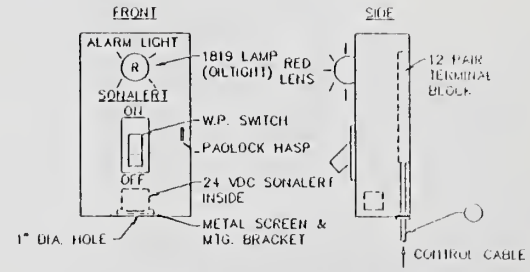
ELECTRICAL DETAILS



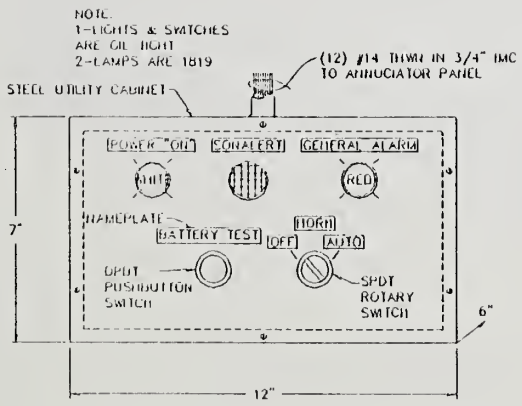
CONVERTER/CONTROL PANEL
ELEVATION NO SCALE ED000110



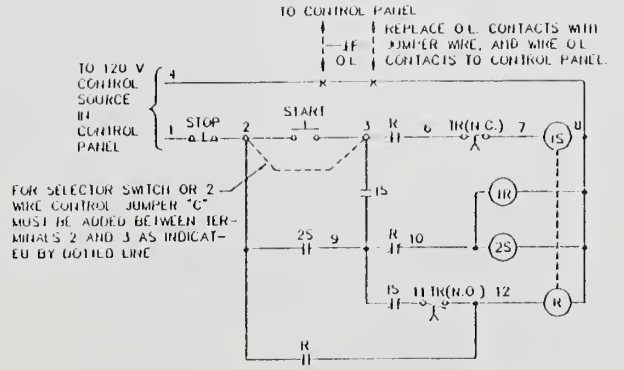
ALARM INDICATOR LADDER SCHEMATIC
NO SCALE ED000112



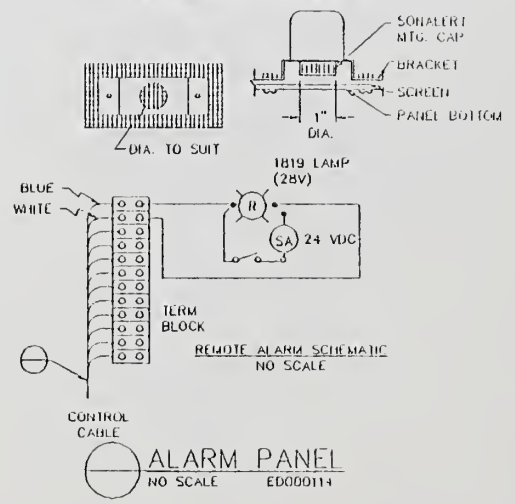
MTG. BRACKET AND SCREEN DETAIL



REMOTE ALARM INDICATOR PANEL
PANEL LAYOUT NO SCALE ED000111



REDUCED VOLTAGE STARTER
3 PHASE AUTO TRANSFORMER SIZES 4-1/2 AND 5
NO SCALE ED000113



REMOTE ALARM SCHEMATIC
NO SCALE

ALARM PANEL
NO SCALE ED000114

ED003600
11/3/86
REV.10-1-87

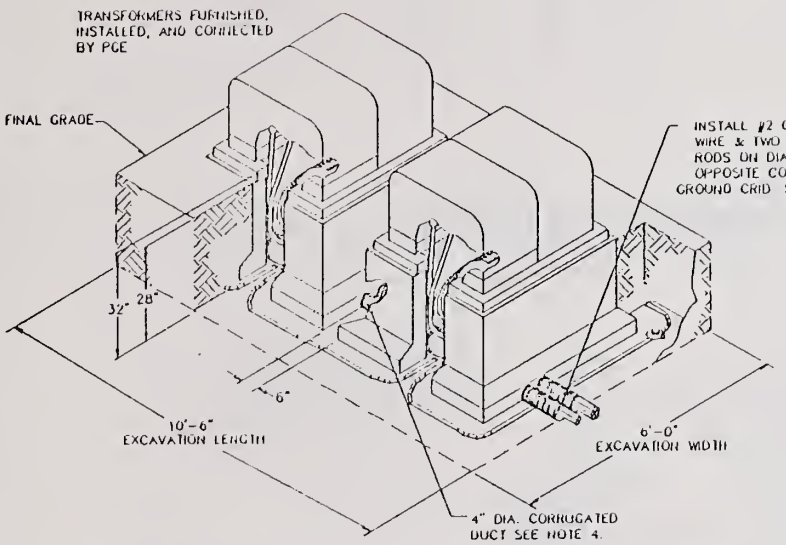
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

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REVIEWED		DATE

DETAILS

ED00 D000114 SHT 4 OF 15

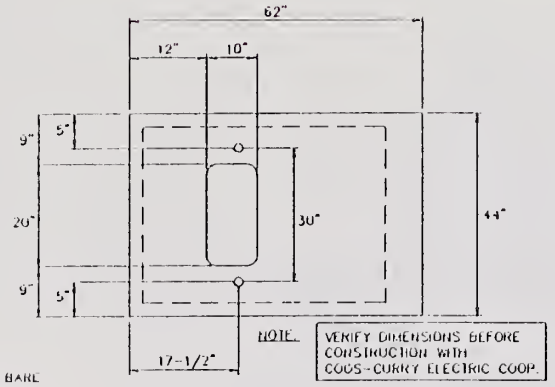


CONTRACTOR TO FURNISH AND INSTALL VAULT, CONDUIT, AND GROUNDING SYSTEM. COORDINATE INSTALLATION WITH PGE

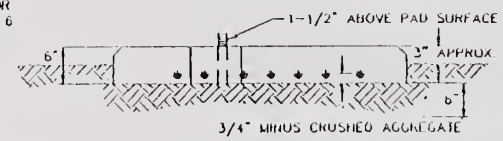
CAUTION: INSURE THAT NEUTRAL STRAP TO TRANSFORMER CASE IS REMOVED ON POWER TRANSFORMER.

NOTES:
1. SET VAULT LID 4 INCHES ABOVE FINAL GRADE: EXCAVATE 28-INCH DEEP HOLE FOR VAULT
2. BACKFILL SHALL BE CONSISTENT WITH LOCAL SOIL CONDITIONS AND APPROVED BY PGE FIELD ENGINEER. MAXIMUM WEIGHT OF VAULT AND TRANSFORMER IS 4000 LBS.
3. COIL ONE LOOP OF EACH PRIMARY CABLE IN BOTTOM OF VAULT TO ALLOW SLACK FOR MOVEMENT OF CABLE. ALSO ALLOW SAME SLACK IN SECONDARY CABLES
4. USE 2 FEET OF 4-INCH SCH. 40 PVC TO PROTECT PRIMARY AND SECONDARY CABLES WHERE THEY ENTER VAULT. INSTALL DUCT BETWEEN VAULTS AND ON OUTSIDE VAULTS AS DIRECTED BY PGE ENGINEER. INSTALL ONE DUCT FOR PRIMARY CABLE AND ONE DUCT FOR SECONDARY CABLES IN EACH POSITION
5. BACKFILL BETWEEN VAULTS AND TAMP UNTIL FIRM.
6. GROUND WIRE AND TWO GROUND RODS TO BE INSTALLED AT LEAST 24 INCHES BELOW FINAL GRADE. LOOP GROUND WIRE INTO EACH VAULT AND FARGO TO ASBURY LOOP.

TRANSFORMER PAD AND CABLE VAULT
NO SCALE — ED000107

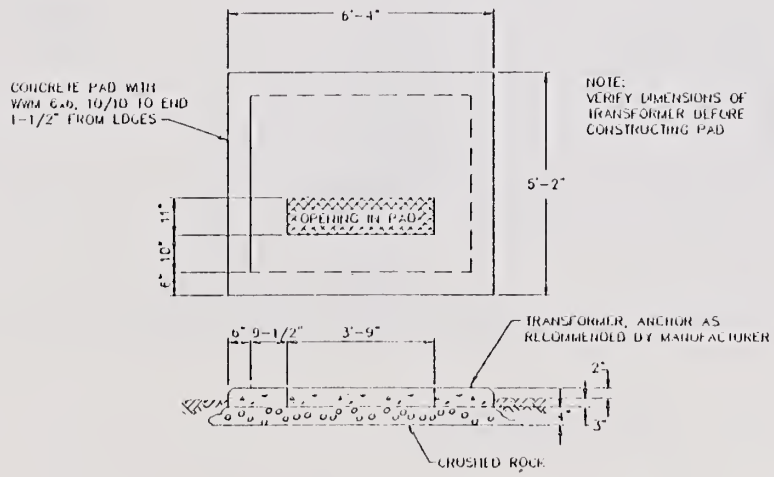


NOTE: VERIFY DIMENSIONS BEFORE CONSTRUCTION WITH COOS-CURRY ELECTRIC COOP.

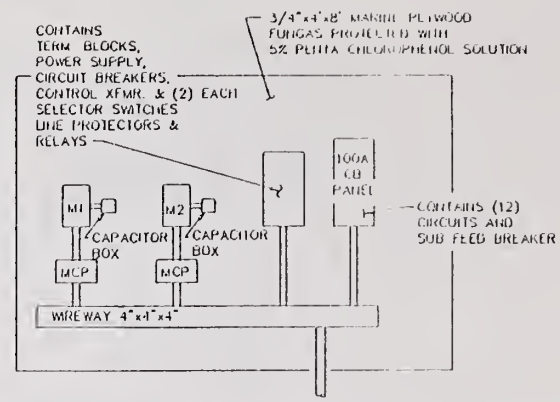


NOTES:
1. PAD ASSEMBLIES INCLUDE SITE PREPARATION, BEDDING AND DRAINAGE.
2. SLAB MAY BE PRECAST OR POURED IN PLACE. CONCRETE SHALL BE 1:2:4 MIXTURE WITH A MINIMUM DESIGN STRENGTH OF 3000 PSI. STEEL REINFORCING SHALL BE 6"x6" NO. 10 WIRE MESH TO STOP 1" FROM SIDES AND CABLE OPENING.
3. ANCHOR BOLTS 5/8" DIAMETER TO EXTEND A MINIMUM OF 1-1/2" ABOVE PAD SURFACE.

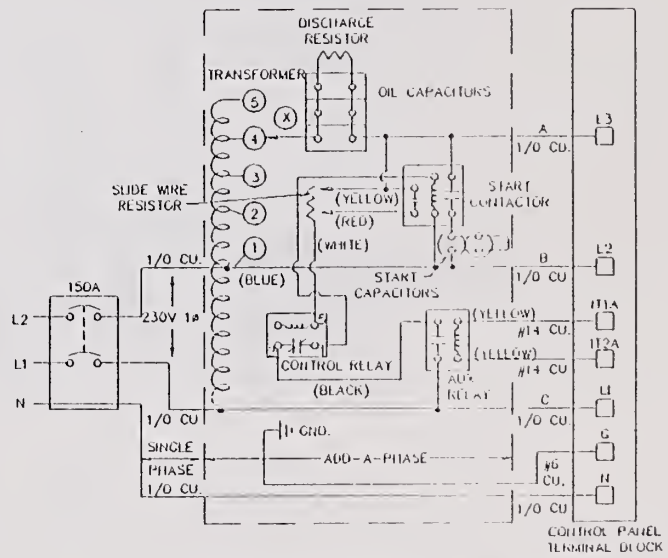
POWER PAD DETAIL
NO SCALE — ED000105



TRANSFORMER PAD DETAIL
NO SCALE — ED000106



FIELD INSTALLED WATER SYSTEM CONTROL PANEL
NO SCALE — E0000108



PHASE CONVERTER WIRING AND CONNECTIONS
NO SCALE — ED000109

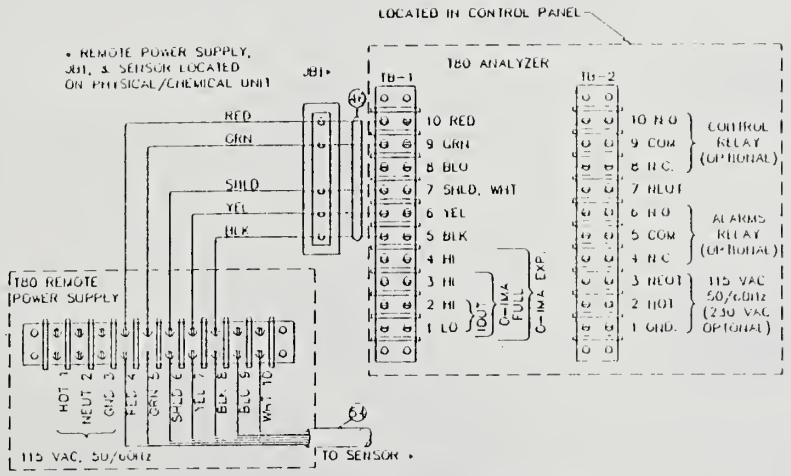
E0003601
11/4/96
REVISED 1-87

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION
DRAWN — DATE
DESIGNED — DATE
CHECKED — DATE
REVIEWED — DATE

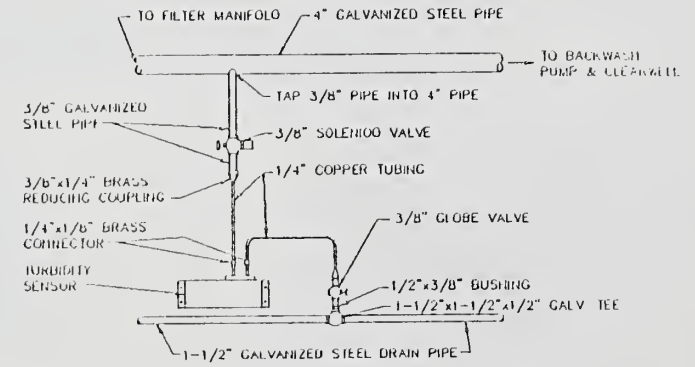
DETAILS

ED000105- ED000109 | SHT 5 OF 15

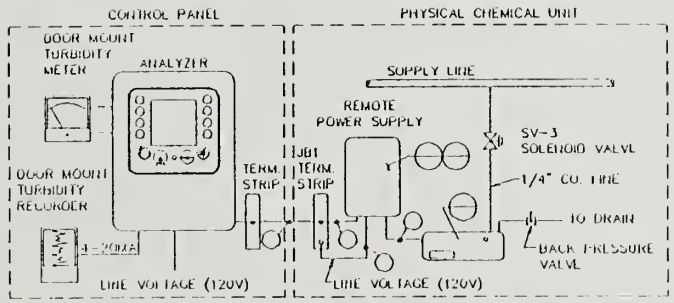
ELECTRICAL DETAILS



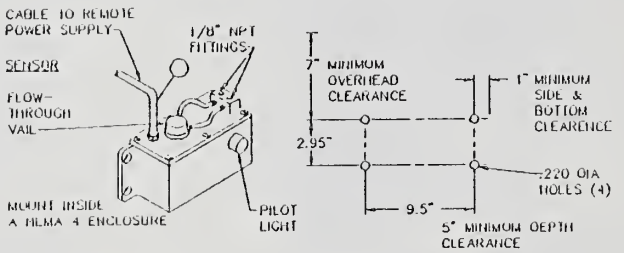
TURBIDITY MONITOR WIRING
NO SCALE
ED000115



TURBIDITY SENSOR PIPING DETAIL
NO SCALE
ED000116



TURBIDITY MONITOR CONNECTIONS
NO SCALE
ED000117



TURBIDITY SENSOR MOUNTING
NO SCALE
ED000118

11/7/86
ED003700
REV.10-1-87

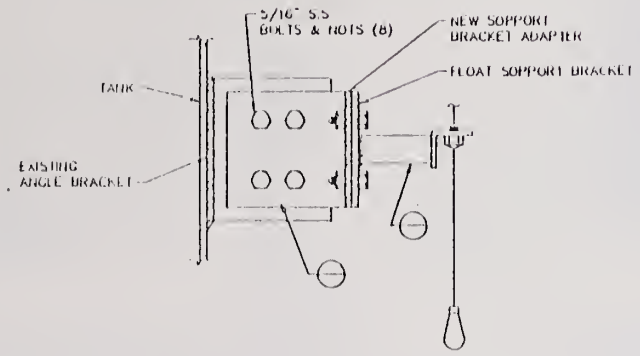
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

DRAWN		DATE
DESIGNED		DATE
CHECKED		DATE
REVIEWED		DATE

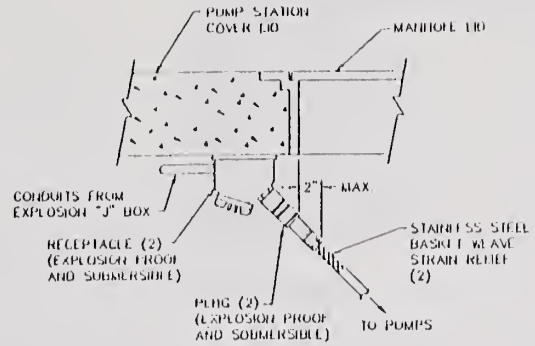
DETAILS

ED000118

SHT 15
OF 15

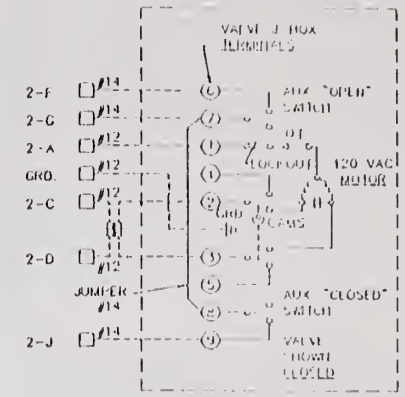


SUPPORT BRACKET/ADAPTER ASSY.
NO SCALE ED000119

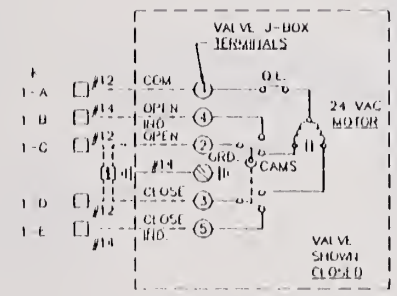


NOTE:
SECORE RECEPTACLE TO PUMP STATION COVER LID W/(4) 5/16Ø
BOLTS- (USE CONCRETE ANCHOR W/MIN. 2,000 POUNDS PULL-OUT
STRENGTH)

EXPLOSION PROOF AND SUBMERSIBLE
PLUG AND RECEPTACLE DETAIL
NO SCALE ED000121

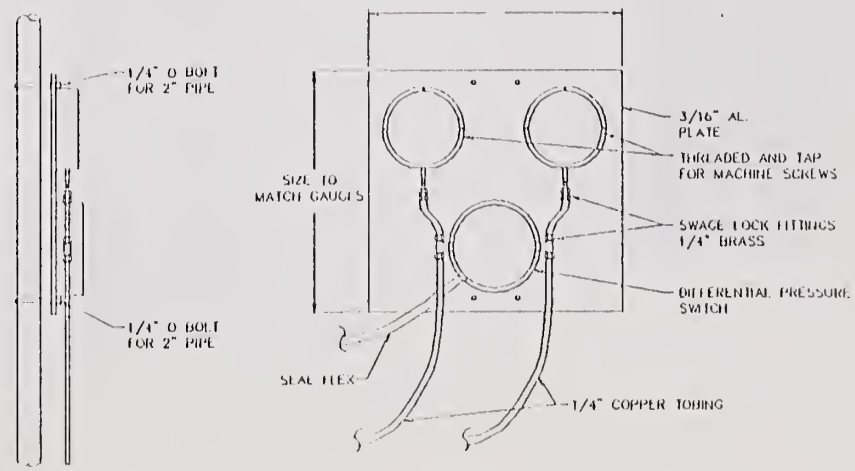


EV-2
VALVE WIRING DIAGRAM
NO SCALE ED000122



* 1-A FOR EV-1, 4 A FOR EV 4, ETC

EV-1,EV-4,EV-5,EV-6,EV-7
VALVE WIRING DIAGRAM
NO SCALE ED000123



DIFFERENTIAL PRESSURE SWITCH
DETAIL NO SCALE ED000124

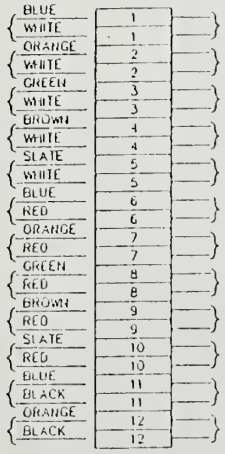
11/1/86
ED003701
REV 10-1-87

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
R6 PACIFIC NORTHWEST REGION
DRAWN DATE
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

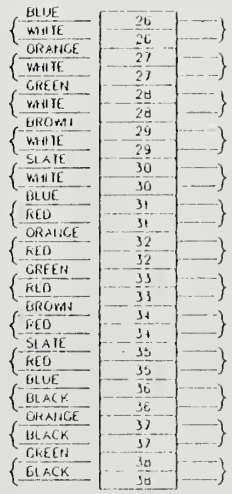
DETAILS

SHT 1
OF 15

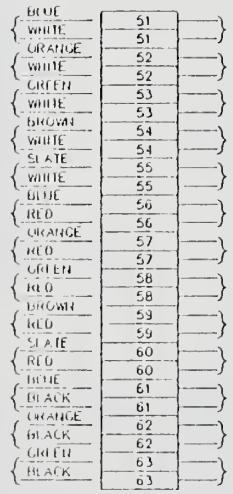
ELECTRICAL DETAILS



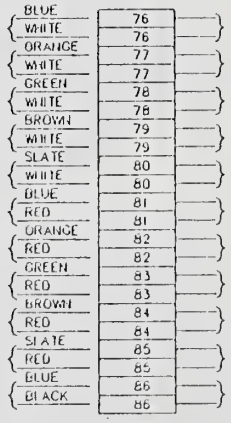
CONTROL CABLE TERMINAL BLOCK CONNECTIONS ED000129



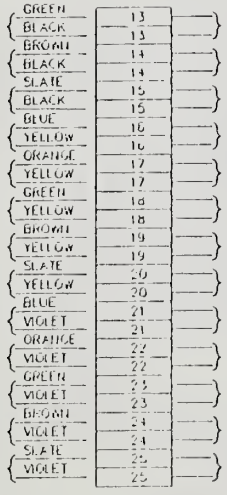
CONTROL CABLE TERMINAL BLOCK CONNECTIONS ED000131



CONTROL CABLE TERMINAL BLOCK CONNECTIONS ED000133

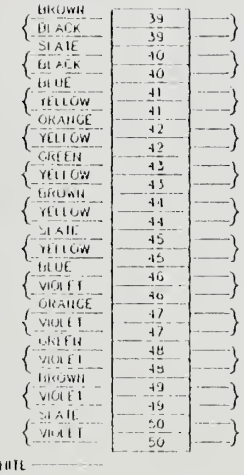


CONTROL CABLE TERMINAL BLOCK CONNECTIONS ED000135



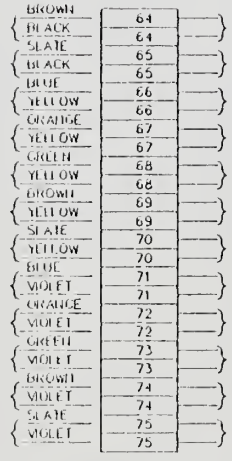
BLUE & WHITE BINDER STRING

CONTROL CABLE TERMINAL BLOCK CONNECTIONS ED000130

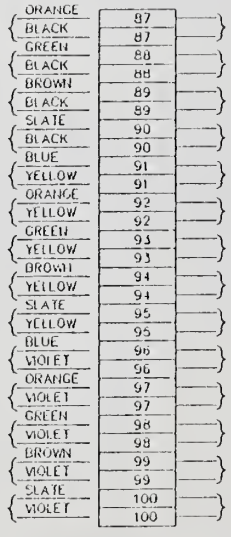


ORANGE & WHITE BINDER STRING

CONTROL CABLE TERMINAL BLOCK CONNECTIONS ED000132



CONTROL CABLE TERMINAL BLOCK CONNECTIONS ED000134



CONTROL CABLE TERMINAL BLOCK CONNECTIONS ED000136

E0003900
10/30/86
REV.10-1-87

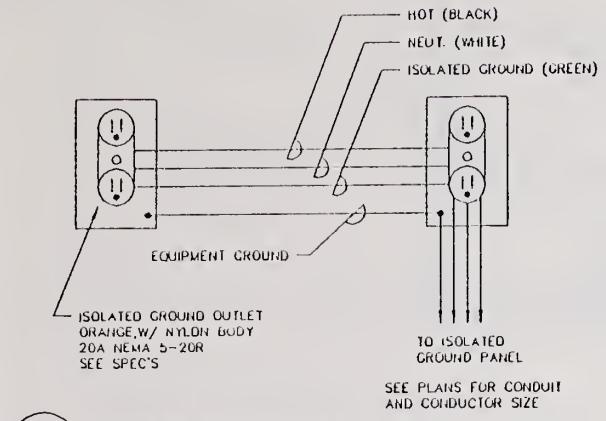
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

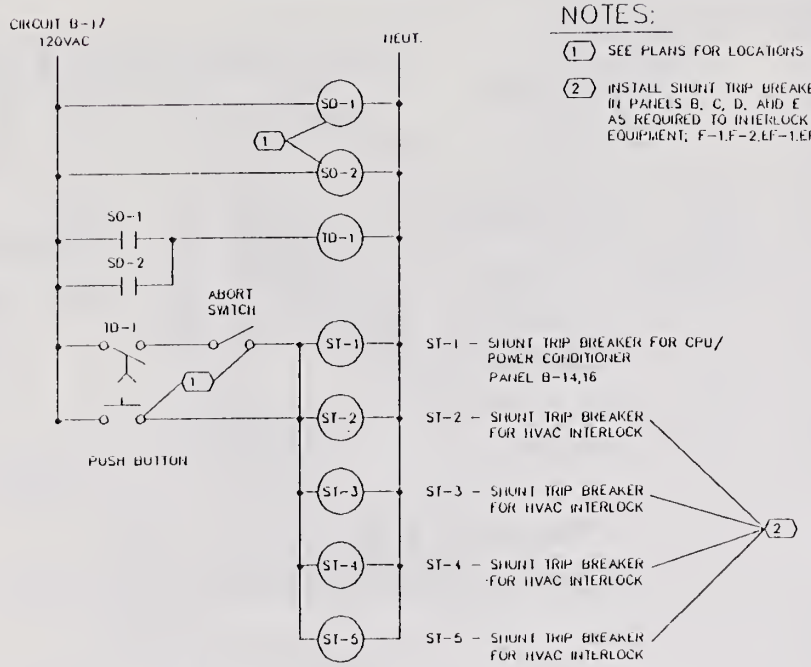
DRAWN ____ DATE ____
DESIGNED ____ DATE ____
CHECKED ____ DATE ____
REVIEWED ____ DATE ____

TERMINAL BLOCK DETAILS
ED000129 THRU ED000136

SHT 2
OF 15



A / E-3 ISOLATED GROUND RECEPTACLE DETAIL ED000139 2/11/88

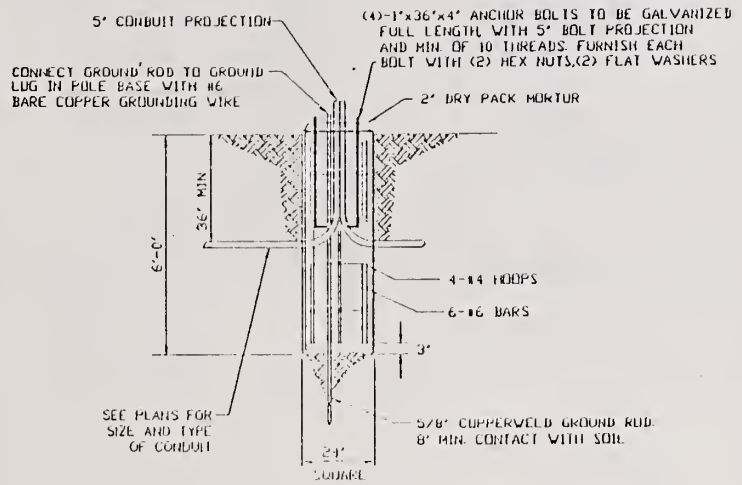


NOTES:

(1) SEE PLANS FOR LOCATIONS

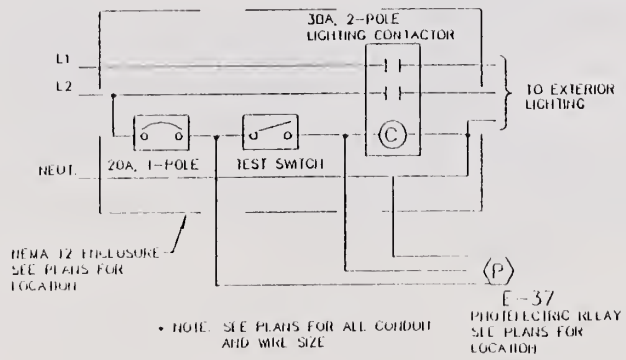
(2) INSTALL SHUNT TRIP BREAKERS IN PANELS B, C, D, AND E AS REQUIRED TO INTERLOCK HVAC EQUIPMENT: F-1,F-2,EF-1,EF-2, AND HP-1.

C / E-3 SHUT-DOWN INTERLOCK DIAGRAM ED000141 2/11/88



LIGHT POLE FOUNDATION

NTS ED000140 2/11/88



B / E-3 LIGHTING CONTACTOR (LC-1) ED000142 2/11/88

E0004001 2/11/88

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

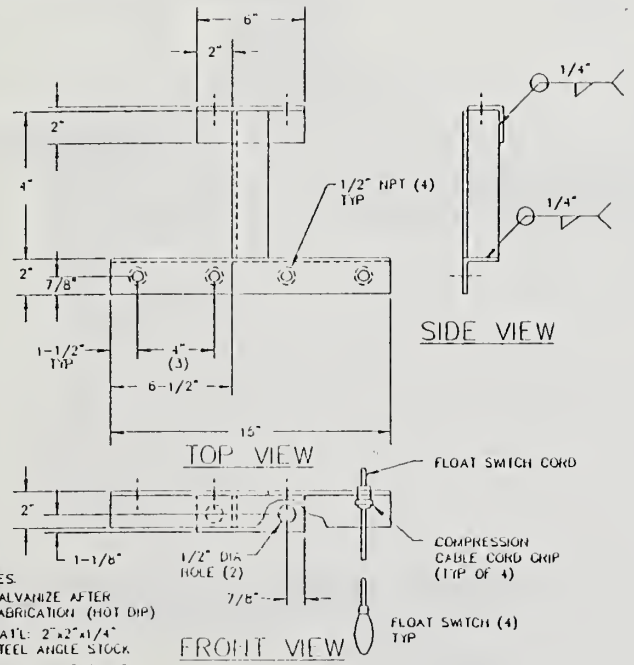
DRAWN DATE
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

DETAILS ED000139-142

DETAILS

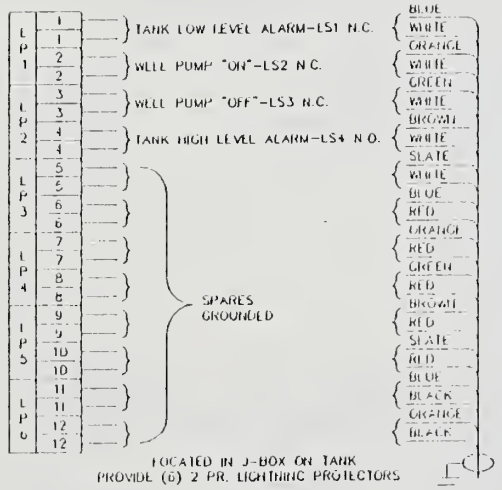
SHT 4

ELECTRICAL DETAILS



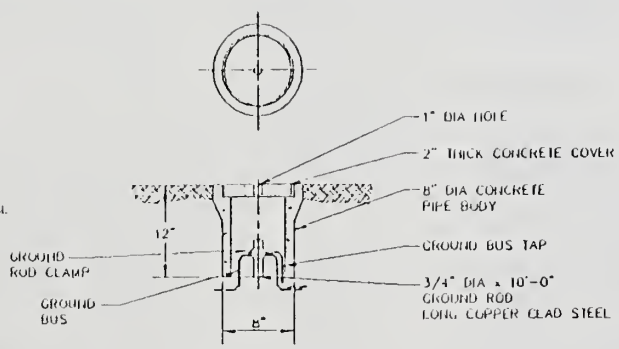
A FLOAT SWITCH CORD SUPPORT BRACKET

NO SCALE ED000042 FEB. 14, 1986



B CONTROL CABLE LIGHTNING PROTECTOR CONNECTIONS

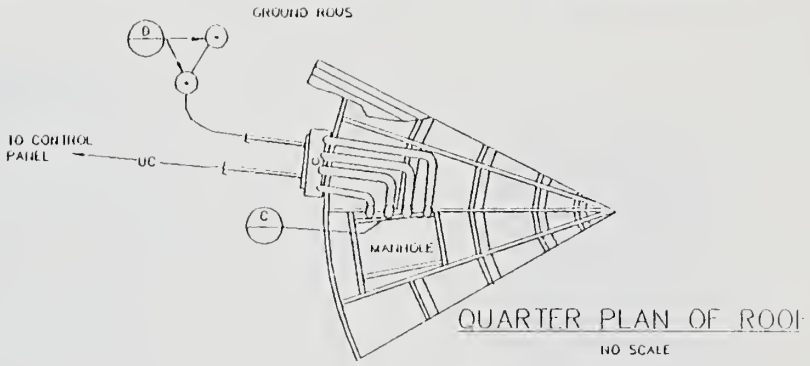
ED000044 FEB. 14,1986 NO SCALE



GROUND ROD INSTALLATION

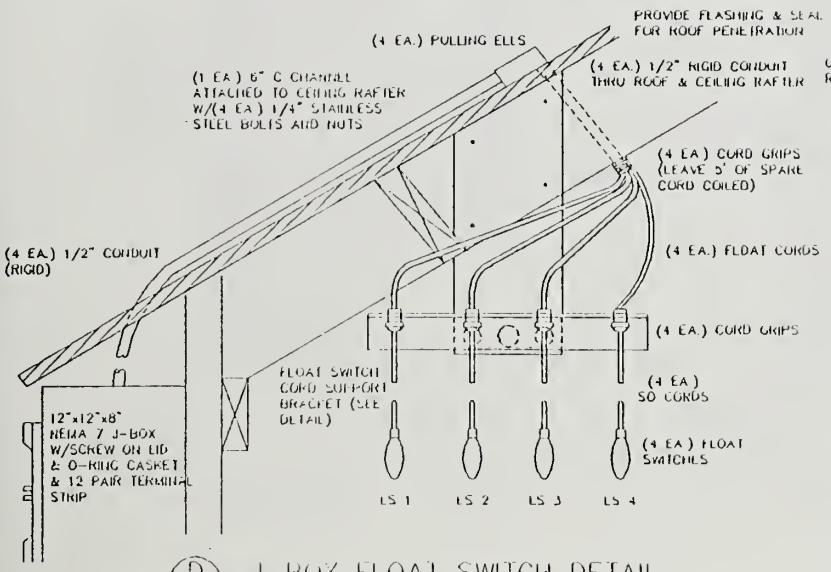
D GROUND ROD DETAIL

NO SCALE ED000021 OCT 11,1985



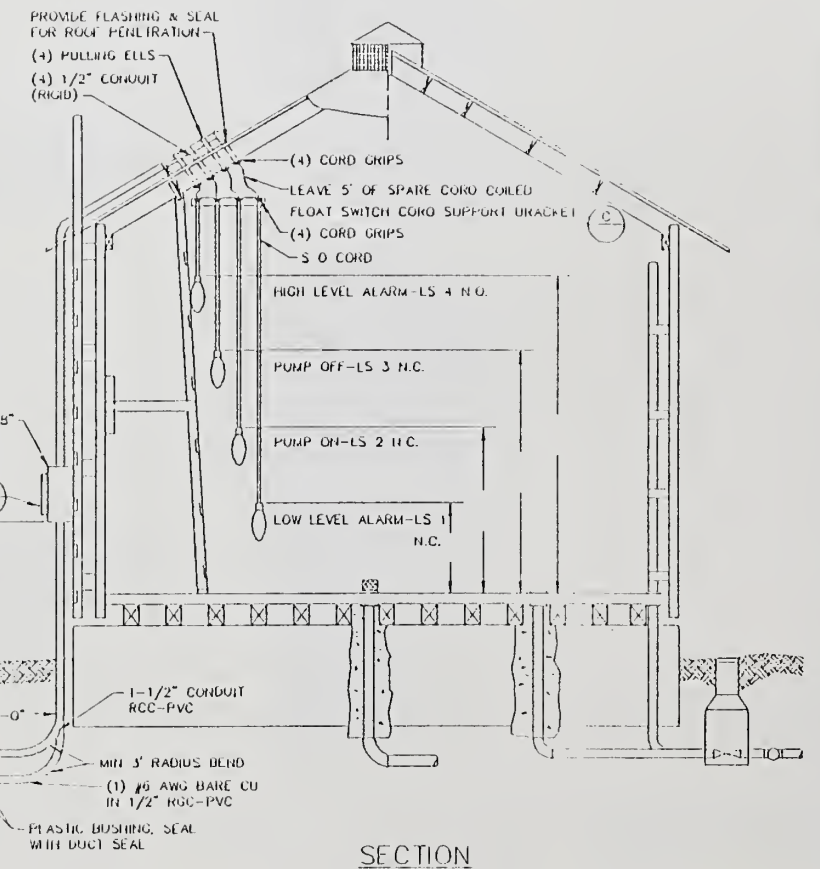
QUARTER PLAN OF ROOF

NO SCALE



D J-BOX FLOAT SWITCH DETAIL

NO SCALE ED000043 FEB 14,1986



SECTION

NO SCALE

ED000000
MAY 27,1988
REV.10-1-87

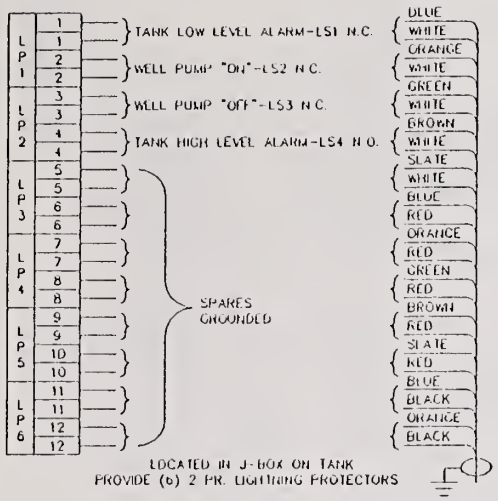
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

DRAWN DATE
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

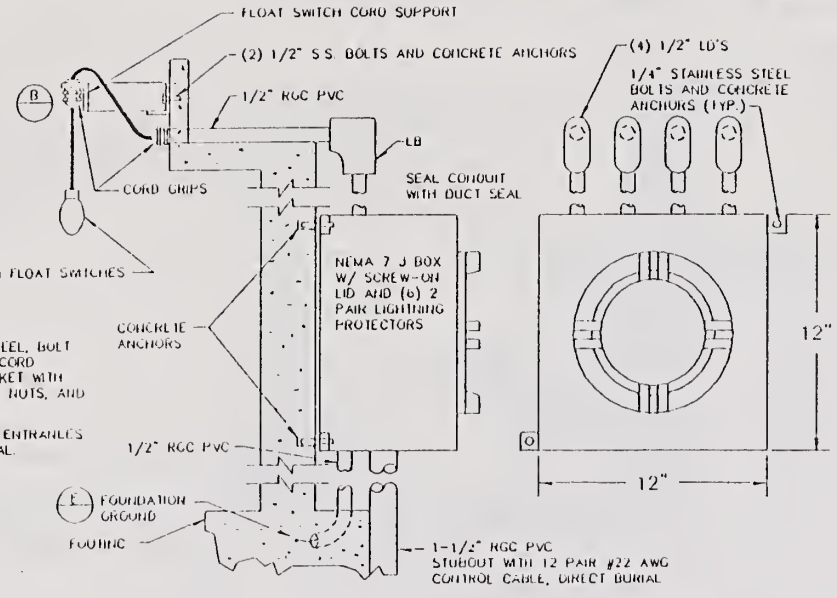
WOOD [illegible] TANK [illegible] PLAN

SHT OF



(B) CONTROL CABLE LIGHTNING PROTECTOR CONNECTIONS

ED000044 FEB. 14,1986 NO SCALE

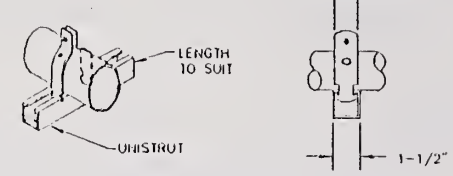


NOTES:
1. IF HATCH IS STEEL, BOLT FLOAT SWITCH CORD SUPPORT BRACKET WITH (2) S.S. BOLTS, NUTS, AND WASHERS
2. SEAL CONDUIT ENTRANCES WITH DUCT SEAL.

(D) J-BOX FLOAT SWITCH DETAIL

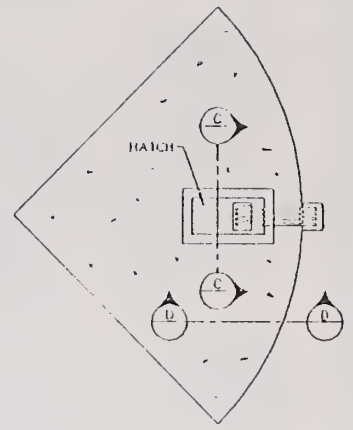
NO SCALE ED000046 FEB 14,1986

NOTE:
BOLT OR WELD UNISTRUT TO WATER TANK



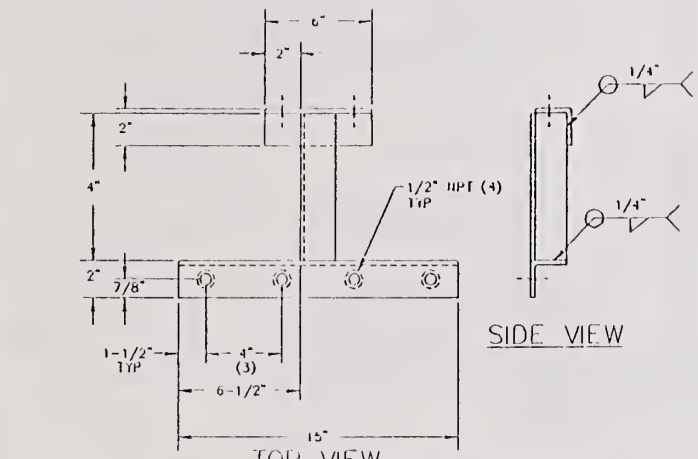
(F) CONDUIT SUPPORT DETAIL

NO SCALE ED000037 FEB 14,1986



QUARTER PLAN OF ROOF

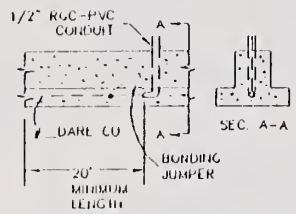
NO SCALE



NOTES:
1. GALVANIZE AFTER FABRICATION. (HOT DIP)
2. MATL: 2"x2"x1/4" STEEL ANGLE STOCK
3. S.S. IS ACCEPTABLE IN LIEU OF GALVANIZED STEEL.

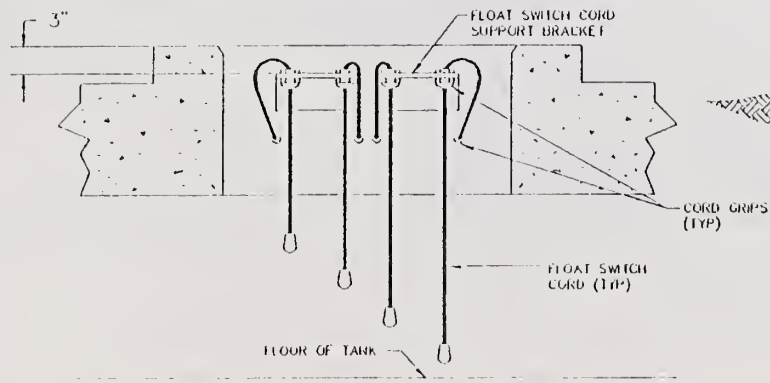
(A) FLOAT SWITCH CORD SUPPORT BRACKET

NO SCALE ED000042 FEB. 14, 1986



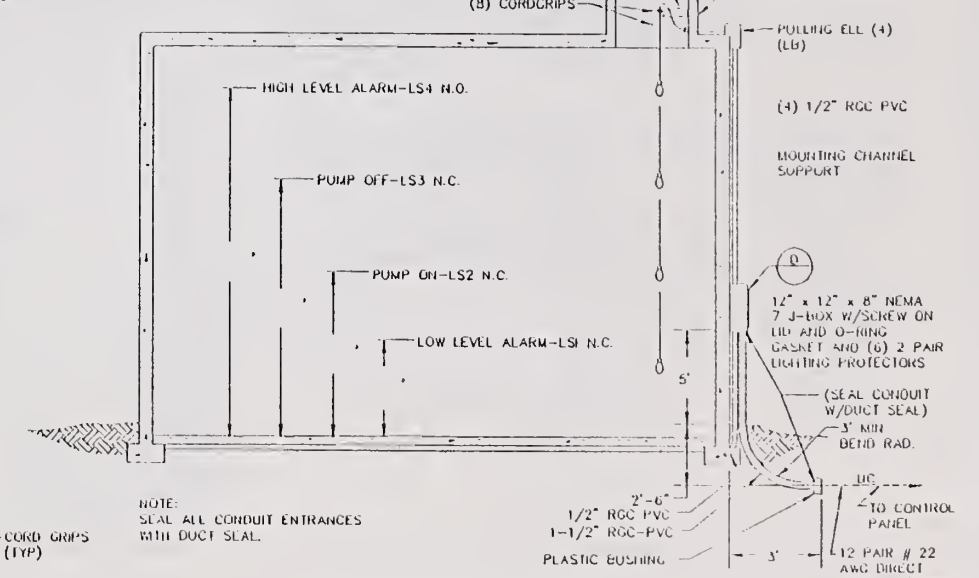
(E) CONCRETE FOUNDATION GROUNDING

NO SCALE ED000011 11 OCT 85



(C) SECTION C-C FLOAT SWITCH MOUNTING

NO SCALE ED000045 FEB 14,1986



NOTE:
SEAL ALL CONDUIT ENTRANCES WITH DUCT SEAL.

CONCRETE WATER TANK

NO SCALE

ED090100
DATE: 5 MAY 1986
REV 10-1-87

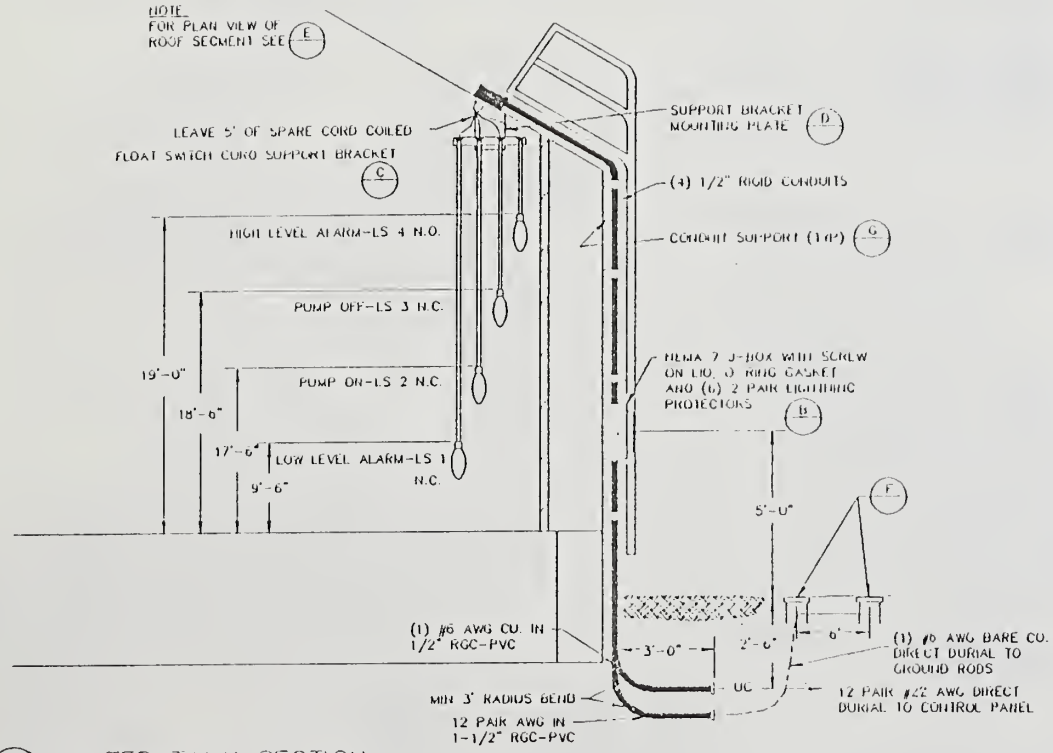
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

INITIATE		DATE
DESIGNED		DATE
CHECKED		DATE
APPROVED		DATE

CONCRETE WATER TANK
ELECTRICAL PLAN

SHT OF

ELECTRICAL DETAILS

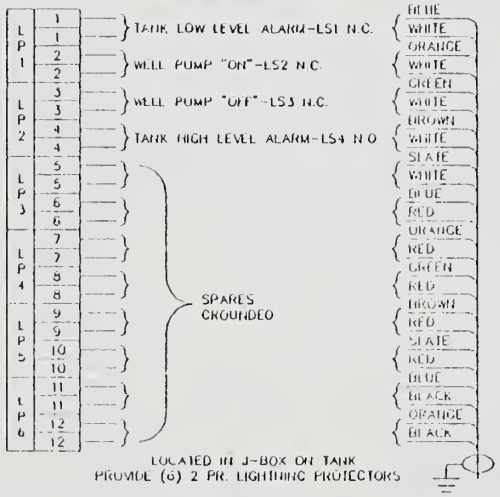


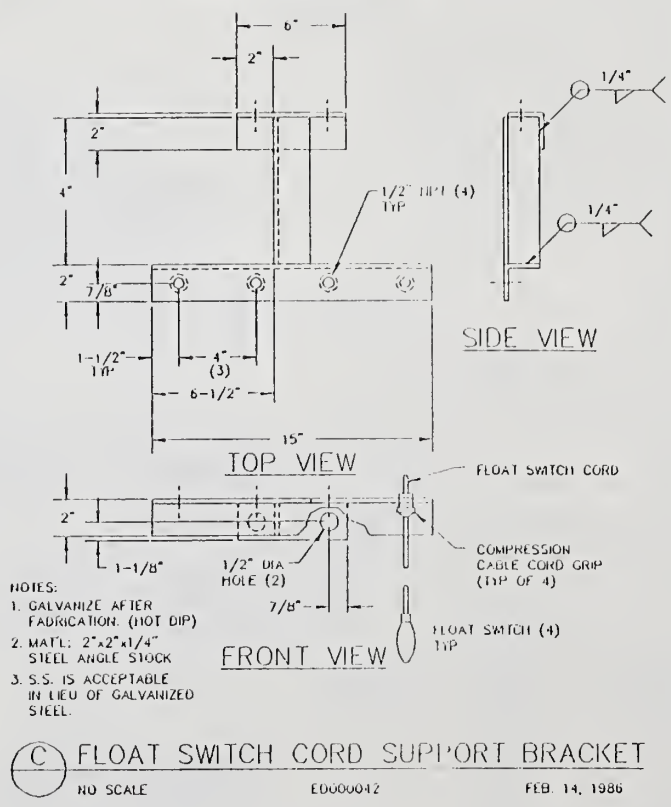
(A) WATER TANK SECTION
NO SCALE

LP 1	1	TANK LOW LEVEL ALARM-LS1 N.C.	BLUE
	1		WHITE
	2	WELL PUMP "ON"-LS2 N.C.	ORANGE
	2		WHITE
LP 2	3	WELL PUMP "OFF"-LS3 N.C.	GREEN
	3		WHITE
	4	TANK HIGH LEVEL ALARM-LS4 N.O.	BROWN
	4		WHITE
LP 3	5	SPARES GROUNDED	SLATE
	5		WHITE
	6		BLUE
	6		RED
LP 4	7		ORANGE
	7		RED
	8		GREEN
	8		RED
LP 5	9		BROWN
	9		RED
	10		SLATE
	10		RED
LP 6	11		BLUE
	11		BLACK
	12		ORANGE
	12		BLACK

LOCATED IN J-BOX ON TANK
PROVIDE (6) 2 PR. LIGHTNING PROTECTORS

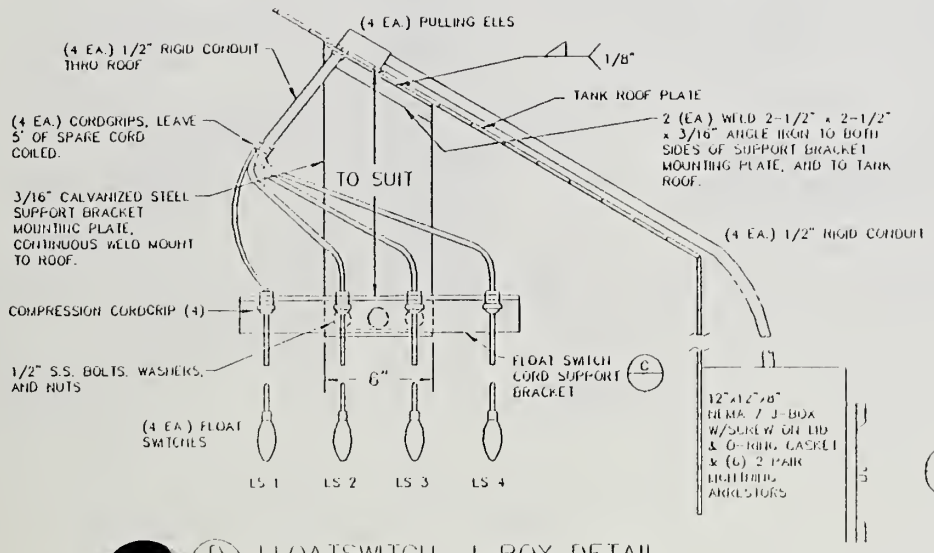
(B) CONTROL CABLE LIGHTNING PROTECTOR CONNECTIONS
ED000044 FEB 14,1986 NO SCALE





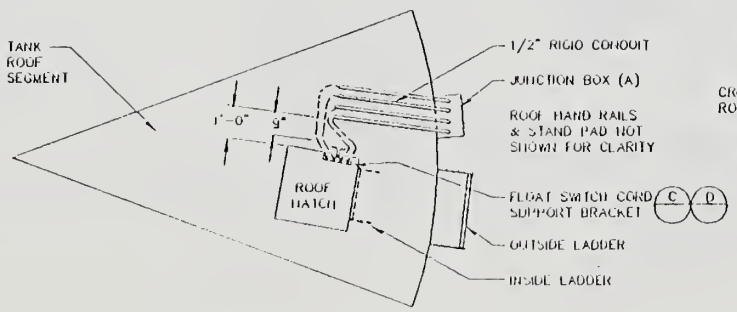
NOTES:
1. GALVANIZE AFTER FABRICATION. (HOT DIP)
2. MATL: 2"x2"x1/4" STEEL ANGLE STOCK
3. S.S. IS ACCEPTABLE IN LIEU OF GALVANIZED STEEL.

(C) FLOAT SWITCH CORD SUPPORT BRACKET
NO SCALE ED000042 FEB. 14, 1986



(D) FLOATSWITCH, J-BOX DETAIL
NO SCALE ED000047 FEB 14,1986

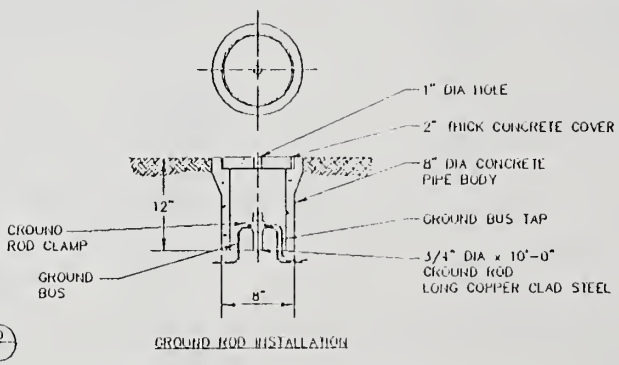
(G) CONDUIT SUPPORT DETAIL
NO SCALE ED000037 FEB 14,1986



(E) PLAN VIEW OF ROOF SEGMENT
NO SCALE ED000018 FEB 14,1986

NOTE:
1. SEAL ALL CONDUIT ENTRANCES WITH DU

ED090270
MAY 6,1986
REV.10-1-87



GROUND ROD INSTALLATION

(F) GROUND ROD DETAIL
NO SCALE ED000021 OCT 11,1985

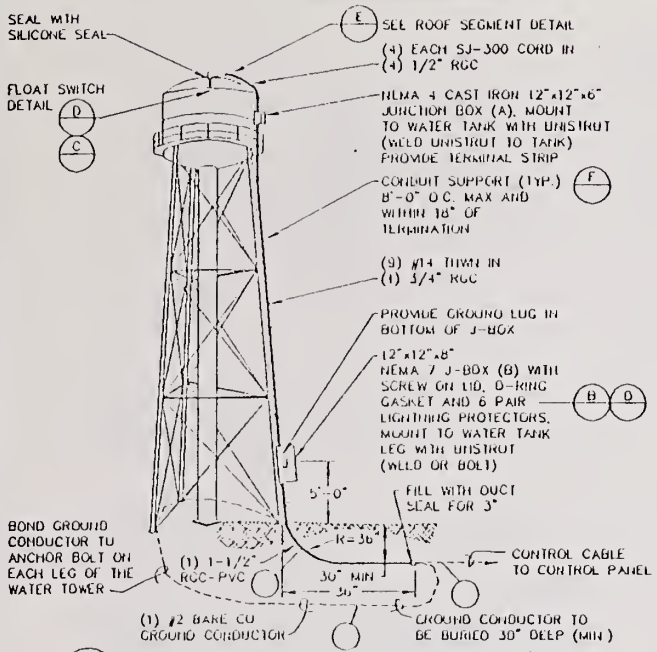
U.S DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

DRAWN ____ DATE ____
DESIGNED ____ DATE ____
CHECKED ____ DATE ____
REVIEWED ____ DATE ____

STEEL WATER STORAGE RESERVOIR

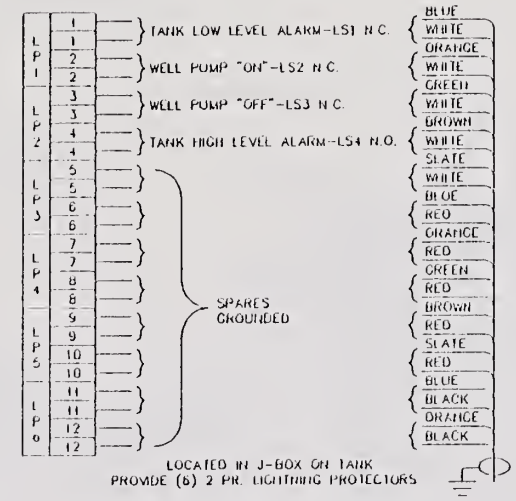
TANK [illegible] ELECTRICAL DETAILS

SHT [illegible] OF



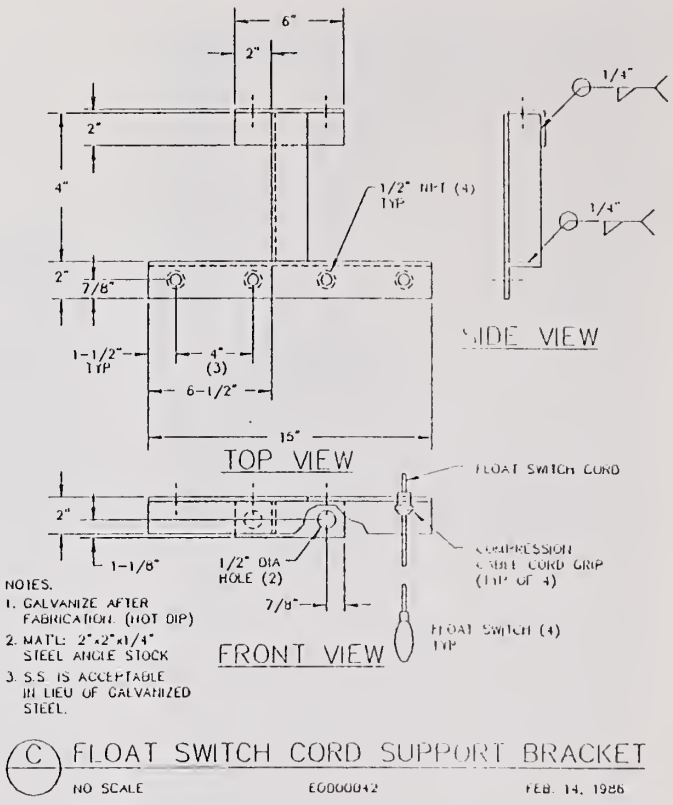
A WATER TOWER CONDUIT, J-BOX & GROUND DETAIL NO SCALE

E0000050 FEB 14,1986



B CONTROL CABLE LIGHTNING PROTECTOR CONNECTIONS

E0000044 FEB 14,1986 NO SCALE

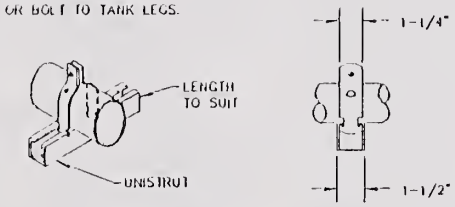


NOTES.
1. GALVANIZE AFTER FABRICATION. (HOT DIP)
2. MATL: 2"x2"x1/4" STEEL ANGLE STOCK
3. S.S. IS ACCEPTABLE IN LIEU OF GALVANIZED STEEL.

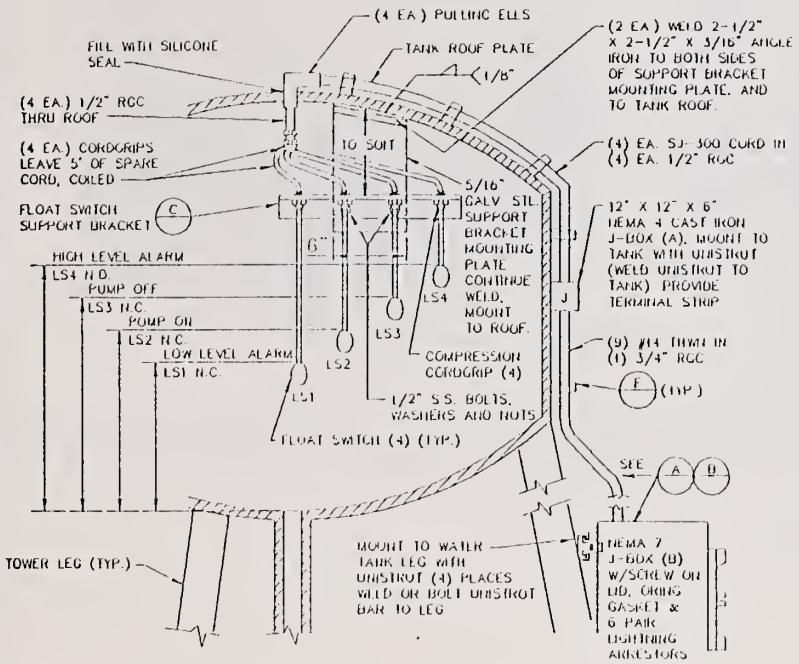
C FLOAT SWITCH CORD SUPPORT BRACKET

NO SCALE E0000042 FEB. 14, 1986

NOTES:
WELD UNISTRUT TO WATER TANK AND WELD OR BOLT TO TANK LEGS.

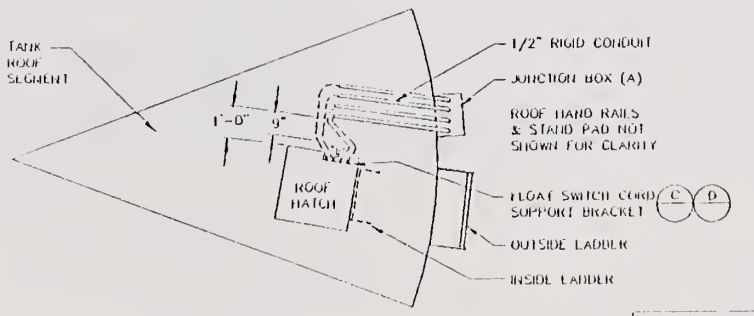


F CONDUIT SUPPORT DETAIL NO SCALE E0000037 FEB 14,1986



D FLOAT SWITCH J-BOX DETAIL

NO SCALE E0000049 FEB 14,1986



L PLAN VIEW OF ROOF SEGMENT

NO SCALE E0000018 FEB 14,1986

E0000300
MAY 14,1986
REVISED 87

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION
DRAWN DATE
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

STEEL WATER TOWER AND TANK
TANK ELECTRICAL DETAILS
SHT OF

ELECTRICAL DETAILS

PANEL _____ LOCATION _____ CLASS ____

____ AMP ____ VOLT ____ PHASE ____ WIRE

W= ____ L= ____ D= ____ PANELBOARD ☐ LOAD CENTER ☐

CIR. NO.	BKR. A	BKR. P	FDR. AWG	DESCRIPTION	LOAD A	LOAD B	LOAD C
1							
3							
5							
7							
9							
11							
2							
4							
6							
8							
10							
12							
MAIN BKR				TOTAL VA			
TOTAL KVA				TOTAL AMPS			

BOTTOM ☐ SURFACE ☐ S.NEUT. ☐ FEEDER ____ ISOL. NEUT. ☐

TOP ☐ FLUSH ☐ I.G.BUSS ☐ AIC _____ REG. GND. BUS ☐

C = CFT BREAKER EDOOOO72

PANEL _____ LOCATION _____ CLASS ____

____ AMP ____ VOLT ____ PHASE ____ WIRE

W= ____ L= ____ D= ____ PANELBOARD ☐ LOAD CENTER ☐

CIR. NO.	BKR. A	BKR. P	FDR. AWG	DESCRIPTION	LOAD A	LOAD B	LOAD C
1							
3							
5							
7							
9							
11							
13							
15							
17							
19							
2							
4							
6							
8							
10							
12							
14							
16							
18							
20							
MAIN BKR				TOTAL VA			
TOTAL KVA				TOTAL AMPS			

BOTTOM ☐ SURFACE ☐ S.NEUT. ☐ FEEDER ____ ISOL. NEUT. ☐

TOP ☐ FLUSH ☐ I.G.BUSS ☐ AIC _____ REG. GND. BUS ☐

C = CFT BREAKER EDOOOO73

PANEL _____ LOCATION _____ CLASS ____

____ AMP ____ VOLT ____ PHASE ____ WIRE

W= ____ L= ____ D= ____ PANELBOARD ☐ LOAD CENTER ☐

CIR. NO.	BKR. A	BKR. P	FDR. AWG	DESCRIPTION	LOAD A	LOAD B	LOAD C
1							
3							
5							
7							
9							
11							
13							
15							
17							
19							
21							
23							
25							
27							
29							
2							
4							
6							
8							
10							
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
MAIN BKR				TOTAL VA			
TOTAL KVA				TOTAL AMPS			

BOTTOM ☐ SURFACE ☐ S.NEUT. ☐ FEEDER ____ ISOL. NEUT. ☐

TOP ☐ FLUSH ☐ I.G.BUSS ☐ AIC _____ REG. GND. BUS ☐

C = CFT BREAKER EDOOOO74

PANEL _____ LOCATION _____ CLASS ____

____ AMP ____ VOLT ____ PHASE ____ WIRE

W= ____ L= ____ D= ____ PANELBOARD ☐ LOAD CENTER ☐

CIR. NO.	BKR. A	BKR. P	FDR. AWG	DESCRIPTION	LOAD A	LOAD B	LOAD C
1							
3							
5							
7							
9							
11							
13							
15							
17							
19							
21							
23							
25							
27							
29							
31							
33							
35							
37							
39							
41							
2							
4							
6							
8							
10							
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							
36							
38							
40							
42							
MAIN BKR.				TOTAL VA			
TOTAL KVA				TOTAL AMPS			

BOTTOM ☐ SURFACE ☐ S.NEUT. ☐ FEEDER ____ ISOL. NEUT. ☐

TOP ☐ FLUSH ☐ I.G.BUSS ☐ AIC _____ REG. GND. BUS ☐

C = CFT BREAKER EDOOOO75

E0090700
REV.1-1-87

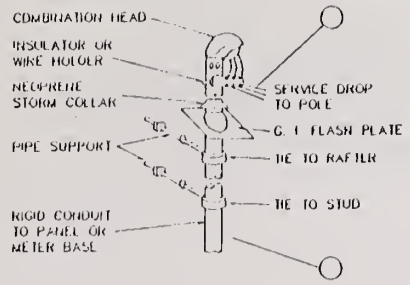
U.S DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

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DESIGNED ____ DATE ____
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REVIEWED ____ DATE ____

EDOOOO72--EDOOOO75

SHT
OF

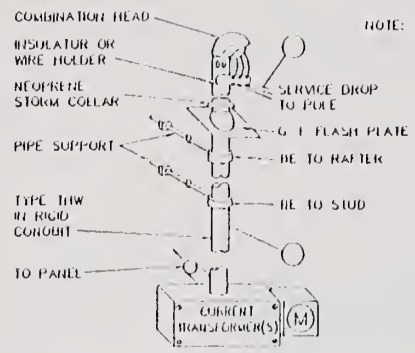


NOTE: GUY AS REQUIRED FOR LOCAL CODES

IN LIEU OF NEOPRENE STORM COLLAR, CONTRACTOR MAY USE SOLDERED 4 LB. LEAD COLLAR. SOLDER AREA SHALL BE PAINTED WITH A RUST INHIBITIVE PAINT.

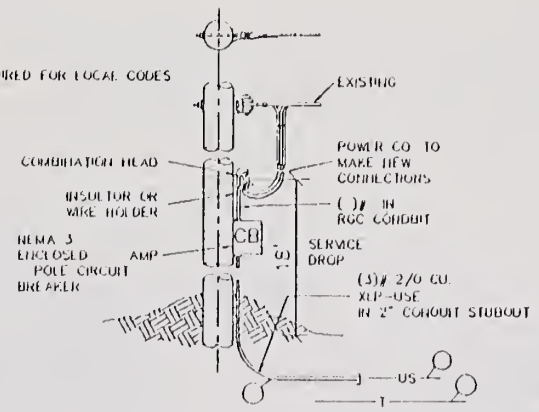
OVERHEAD SERVICE ENTRANCE
NO SCALE ED000001 12 SEP 85

IN LIEU OF NEOPRENE STORM COLLAR, CONTRACTOR MAY USE SOLDERED 4 LB. LEAD COLLAR. SOLDER AREA SHALL BE PAINTED WITH A RUST INHIBITIVE PAINT.

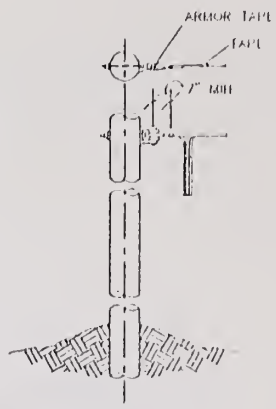


OVERHEAD SERVICE ENTRANCE
NO SCALE ED000002 12 SEP 85

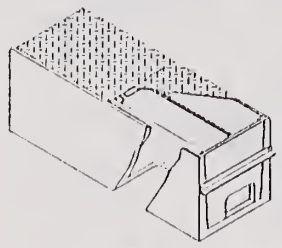
NOTE: GUY AS REQUIRED FOR LOCAL CODES

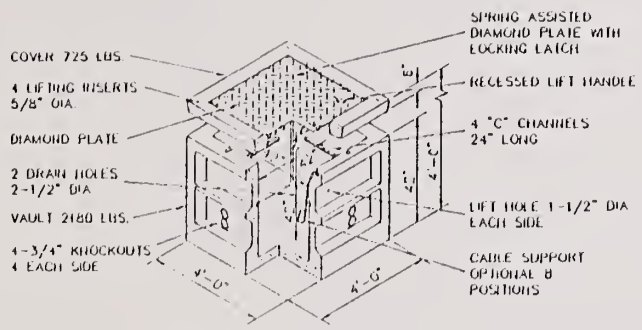


SERVICE CONNECTION DETAIL
NO SCALE ED000003 16 SEP 85

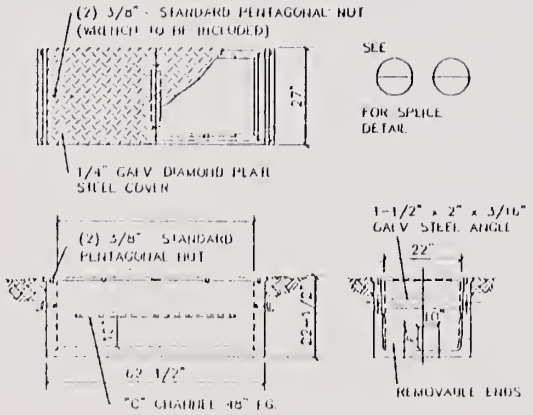


SERVICE CONNECTION DETAIL
NO SCALE ED000004 16 SEP 85





SPLICE VAULT
NO SCALE ED000005 17 SEP 85



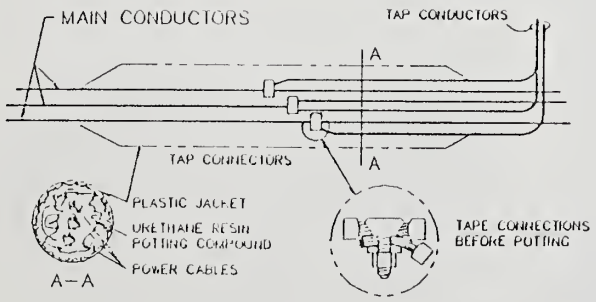
( ) SPLICE VAULT DETAIL
NO SCALE ED000006 19 SEP 85

E0090900
4-14-86
REV. TO 1-87

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION
DRAWN ____ DATE ____
DESIGNED ____ DATE ____
CHECKED ____ DATE ____
REVIEWED ____ DATE ____

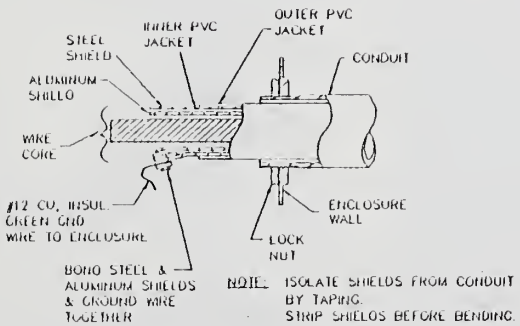
ED000001 ED000006 SHEET OF

ELECTRICAL DETAILS



POWER CABLE TAP SPLICE DETAIL

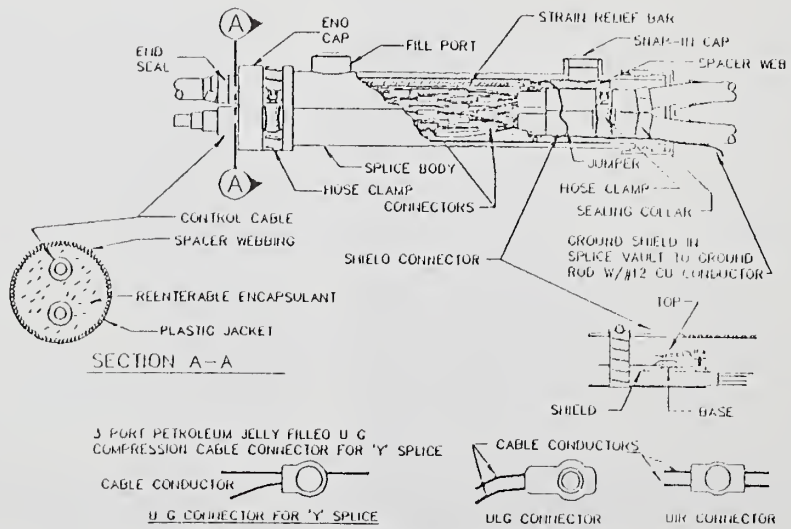
NO SCALE ED000007 20 SEP 85



NOTE: ISOLATE SHIELDS FROM CONDUIT BY TAPING. STRIP SHIELDS BEFORE BENDING.

CONTROL CABLE GROUNDING

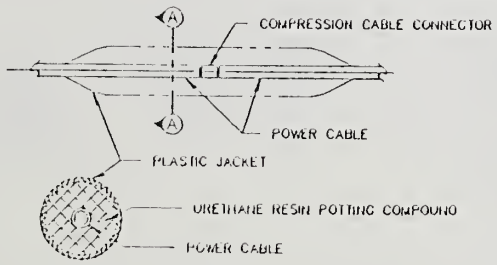
NO SCALE E0000008 19 SEP 85



SECTION A–A

CONTROL CABLE SPLICE DETAIL

NO SCALE E0000009 25 SEP 85



SECTION A–A

POWER CABLE SPLICE DETAIL

NO SCALE ED000010 19 SEP 85

E0092400
4-14-86
REV 10-1-87

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

DRAWN ____ DATE ____
DESIGNED ____ DATE ____
CHECKED ____ DATE ____
REVIEWED ____ DATE ____

ED0000F-000010 SHT OF

ELECTRICAL PROTOTYPE

PLOT 1=1 FOR 12"=1 FT.

SCALE IN INCHES 0 .5 1 2

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

DRAWN ____ DATE
DESIGNED ____ DATE
CHECKED ____ DATE
APPROVED ____ DATE

EBOR--01N.DWG

SHT
OF

ELECTRICAL DETAILS

ELECTRICAL PROTOTYPE

PLOT 1=24 FOR 1/2"=1 FT.

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

DRAWN		DATE
DESIGNED		DATE
CHECKED		DATE
REVIEWED		DATE

EBOR-02N.DWG

SHT
OF

ELECTRICAL PROTOTYPE

PLOT 1=48 FOR 1/4"=1 FT.

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

DRAWN ____ DATE ____
DESIGNED ____ DATE ____
CHECKED ____ DATE ____
REVIEWED ____ DATE ____

EBOR--04.DWG

SHT ____
OF ____

ELECTRICAL DETAILS

ELECTRICAL PROTOTYPE

PLOT 1=96 FOR 1/8"=1 FT.

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

DRAWN ____ DATE ____
DESIGNED ____ DATE ____
CHECKED ____ DATE ____
REVIEWED ____ DATE ____

EBOR-08N.DWG

SHT ___ OF ___

ELECTRICAL PROTOTYPE

PLOT 1=192 FOR 1/16"=1 FT.

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

DRAWN	DATE
DESIGNED	DATE
CHECKED	DATE
REVIEWED	DATE

EBOR 16N.DWG

SHT OF

ELECTRICAL DETAILS

ELECTRICAL PROTOTYPE

PLOT 1=384 FOR 1/32"=1 FT.

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

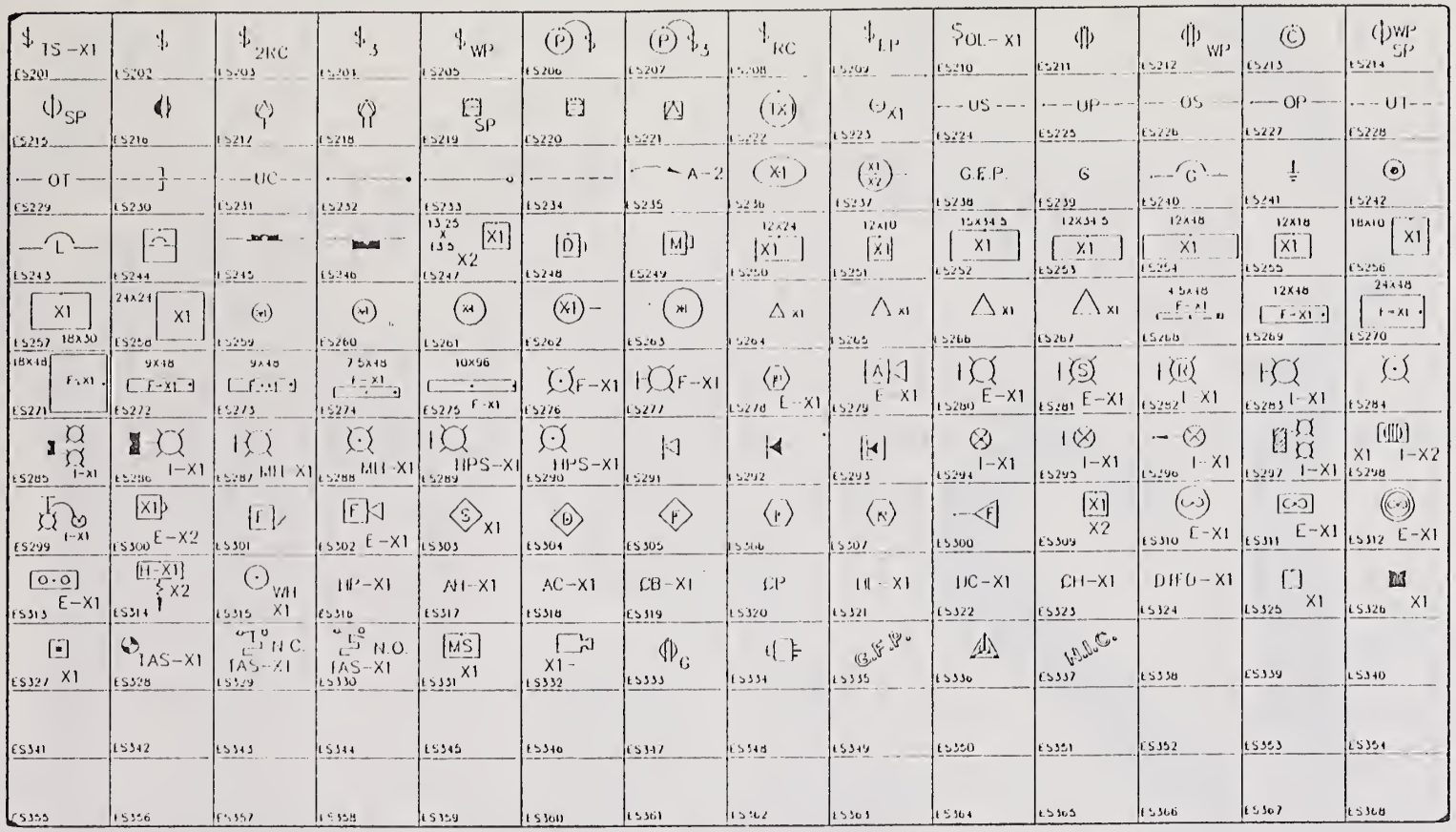
THE PACIFIC NORTHWEST REGION

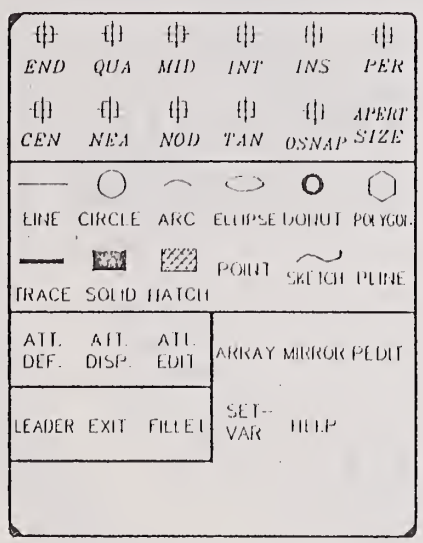
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DESIGNED _____ DATE _____
CHECKED _____ DATE _____
REVIEWED _____ DATE _____

EBOR-32N.DWG

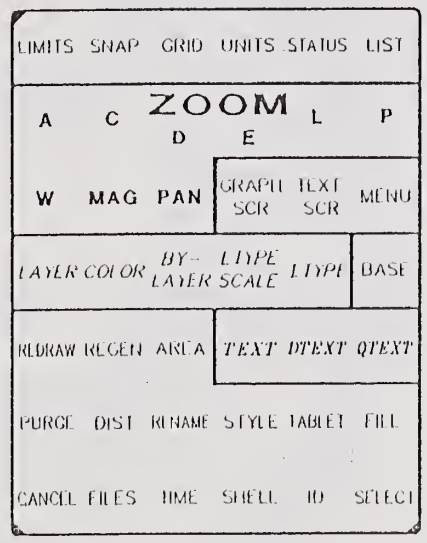
SHT
OF

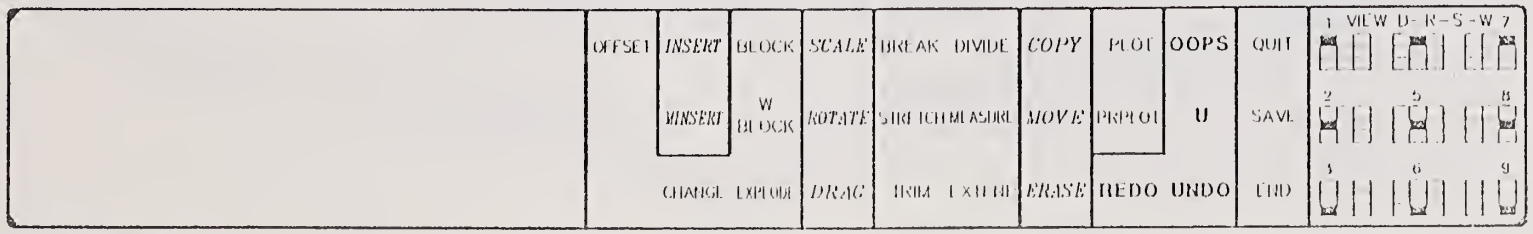
ELECTRICAL











USE ELECTRIC.MNU

ELECTRIC.DWG REV 8.5.87

ELECTRICAL DETAILS

ACAD9 FONTS

AU102S00 - 12345 ABCDE
AU102S01 - 12345 ABCDE
AU120S00 - 12345 ABCDE
AU120S01 - 12345 ABCDE
AU150S00 - 12345 ABCDE
COMPLEX - 12345 ABCDE
ВШСИЛЛИВ - 12345 АБВГД
ЧЙРИЛТЛЧ - 12345 АБЧДЕ
GOTHIC - 12345 ABCDE
GOTHIC - 12345 ABCDE
GOUHIAI - 12345 ABCDE
ГРЕЕКХ - 12345 АВХΔЕ
ГРЕЕКΣ - 12345 АВХΔЕ
ITALIC - 12345 ABCDE
ITALICC - 12345 ABCDE
ITALICT - 12345 ABCDE

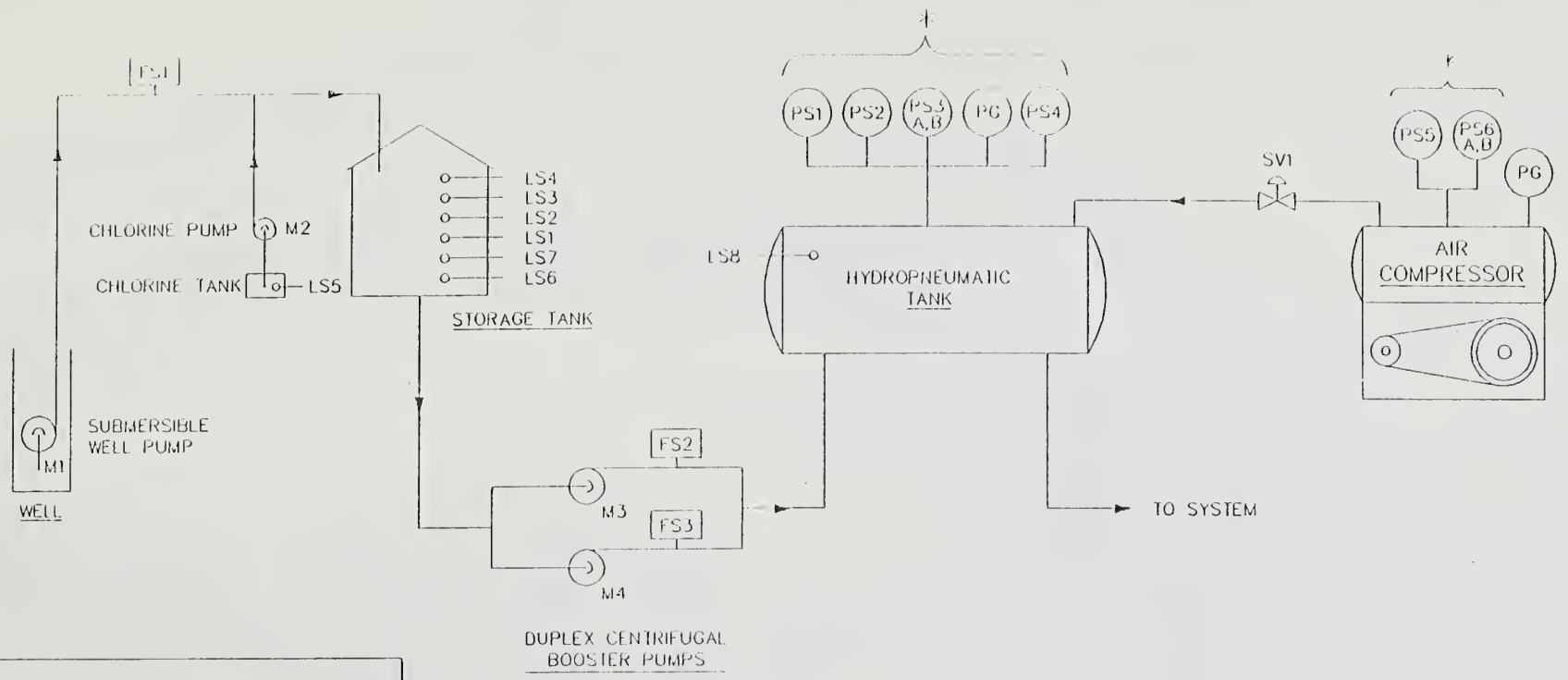
MONOTXT - 12345 ABCDE
ROMANC - 12345 ABCDE
ROMAND - 12345 ABCDE
ROMANS - 12345 ABCDE
ROMANT - 12345 ABCDE
SCRIPTC - 12345 ABCDE
SCRIPTS - 12345 ABCDE
SIMPLEX - 12345 ABCDE

☿♃⊙♄☊♅♇ - 12345 ⊙☿♀⊕♂
✕✡♈♐ - 12345 ◻△◇☆
√→<ℵ⊂· - 12345 ℵ′|||±
6⁄ — S - 12345
---↰--♭⁀ - 12345 ·⁀oo
TXT - 12345 ABCDE
TXTTBL - 12345 ABCDE

FONTS.DWG

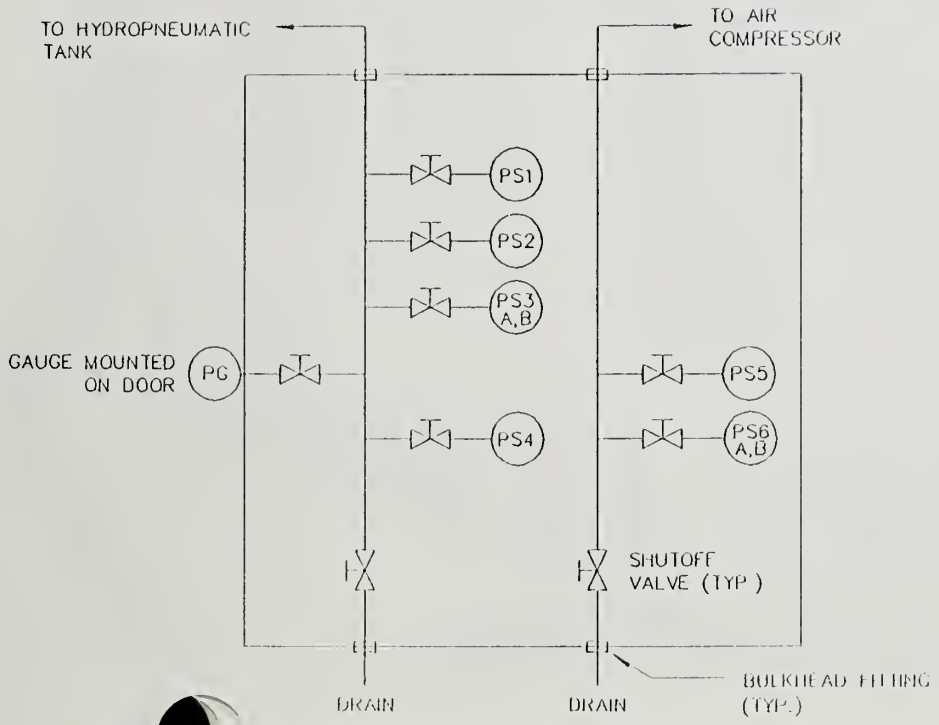


FSLOGO.DWG

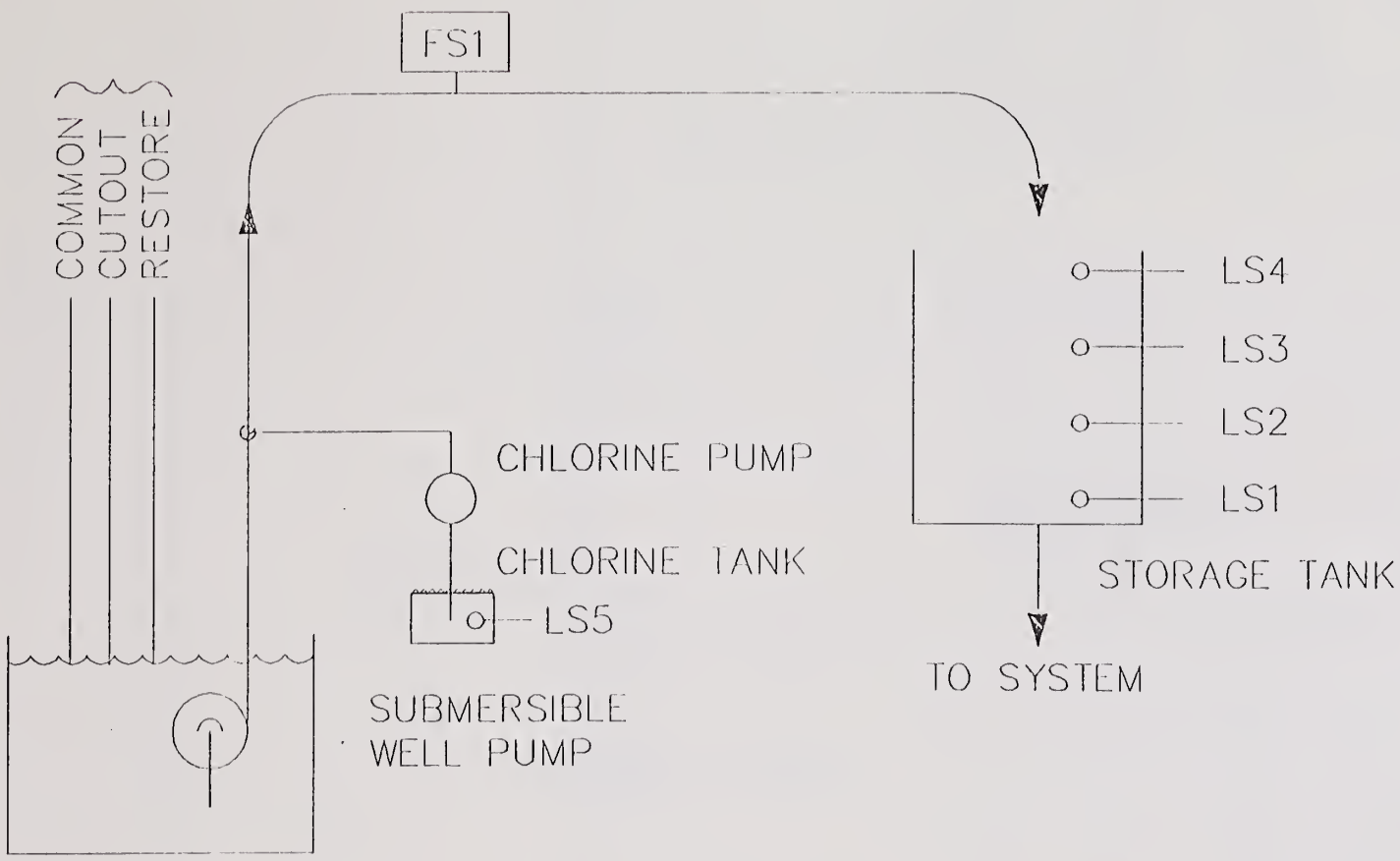


NOTE:
USE PRESSURE GAUGE MODEL _____
USE MERCOID PRESSURE SWITCH MODEL _____
USE SOLENOID VALVE _____
USE FLOW SWITCH _____

ONE-LINE DIAGRAM

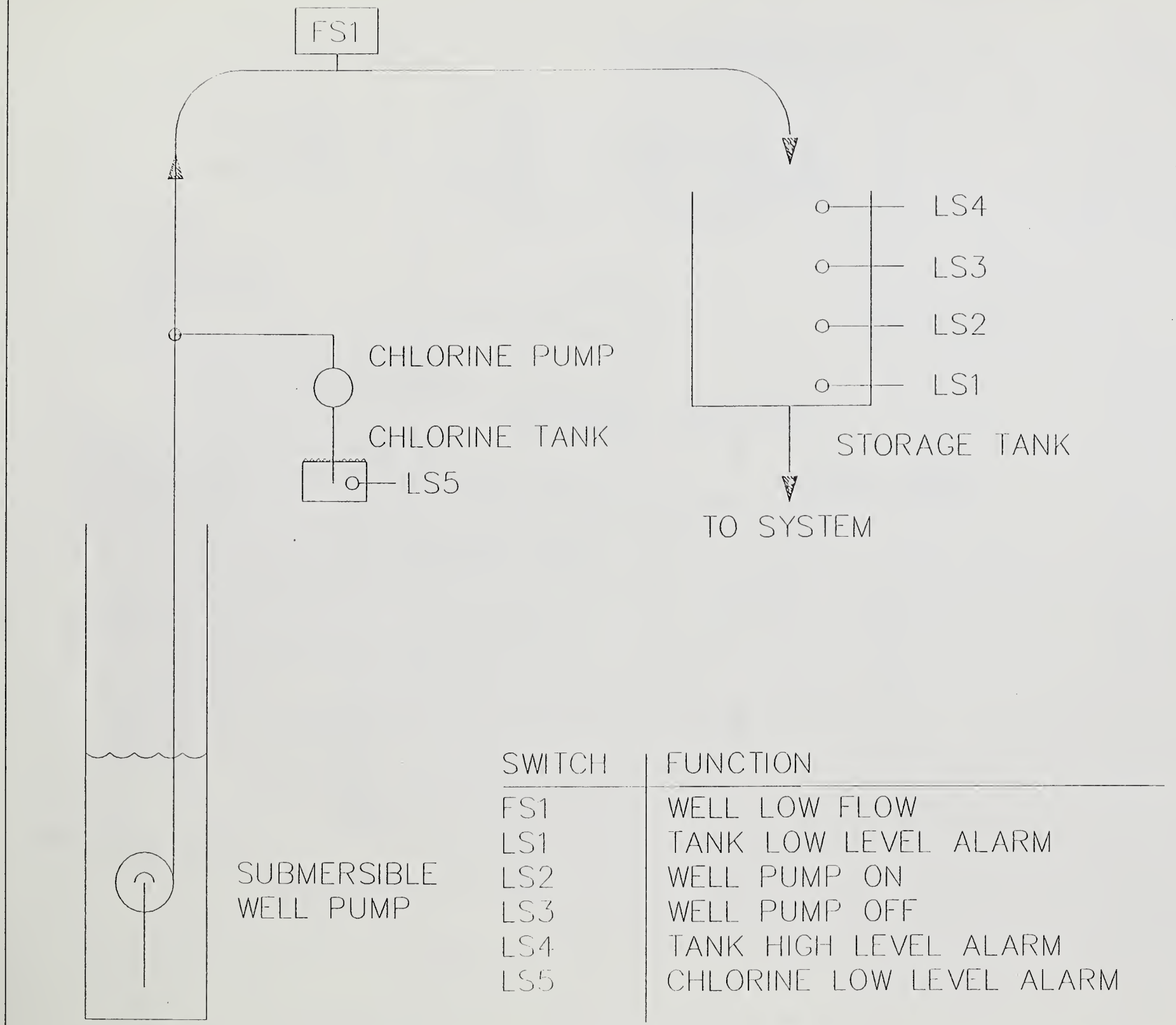


NEUMATIC ONE-LINE DIAGRAM



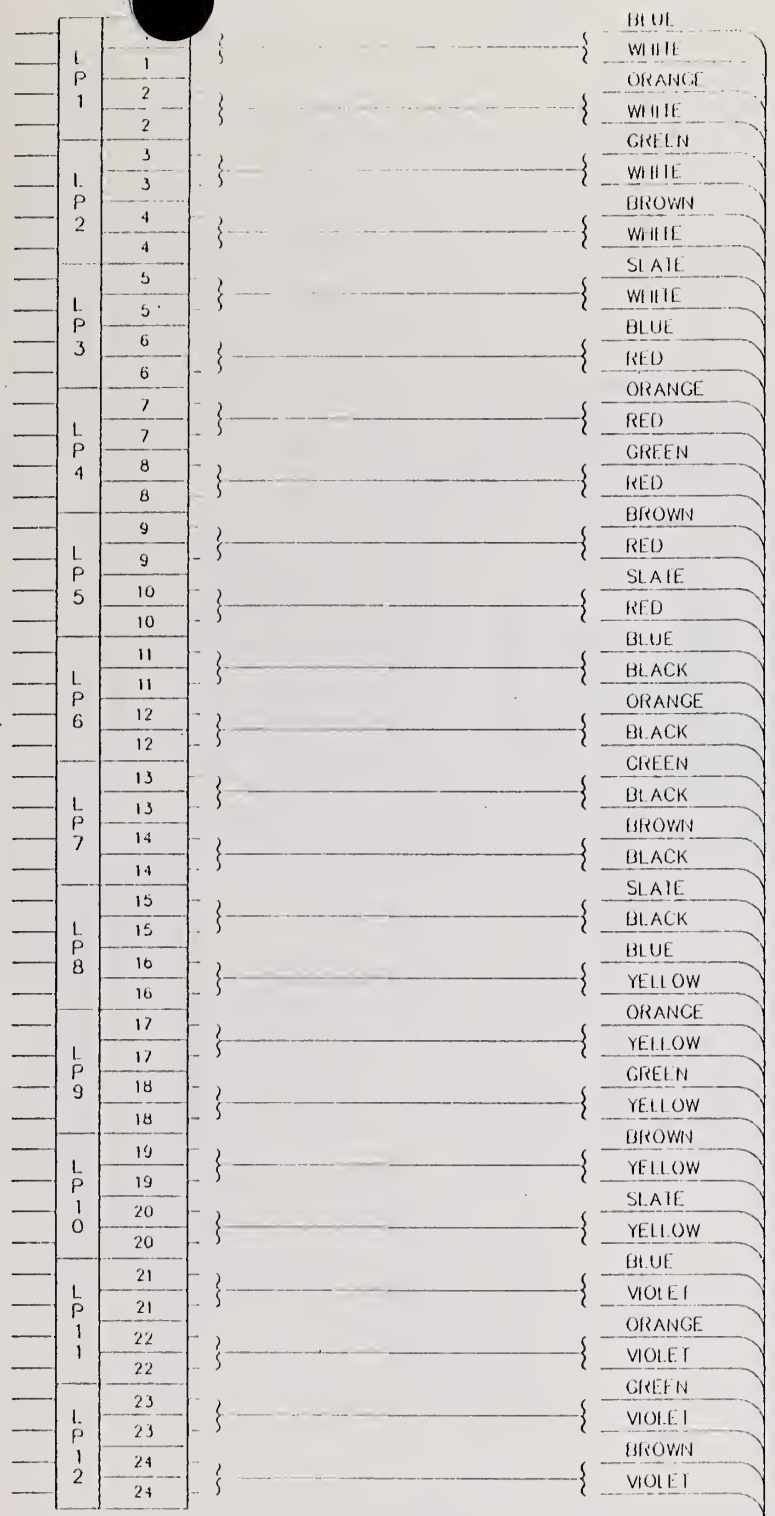
SWITCH	FUNCTION
FS1	WELL LOW FLOW
LS2	WELL PUMP ON
LS3	WELL PUMP OFF
LS4	TANK HIGH LEVEL ALARM
LS1	TANK LOW LEVEL ALARM
LS5	CHLORINE LOW LEVEL ALARM

HYDRAUL.DWG
2/12/88



SWITCH	FUNCTION
FS1	WELL LOW FLOW
LS1	TANK LOW LEVEL ALARM
LS2	WELL PUMP ON
LS3	WELL PUMP OFF
LS4	TANK HIGH LEVEL ALARM
LS5	CHLORINE LOW LEVEL ALARM

HYDRAUL1.DWG



NO SCALE

LPSTRIP.DWG
NOV. 3, 1987

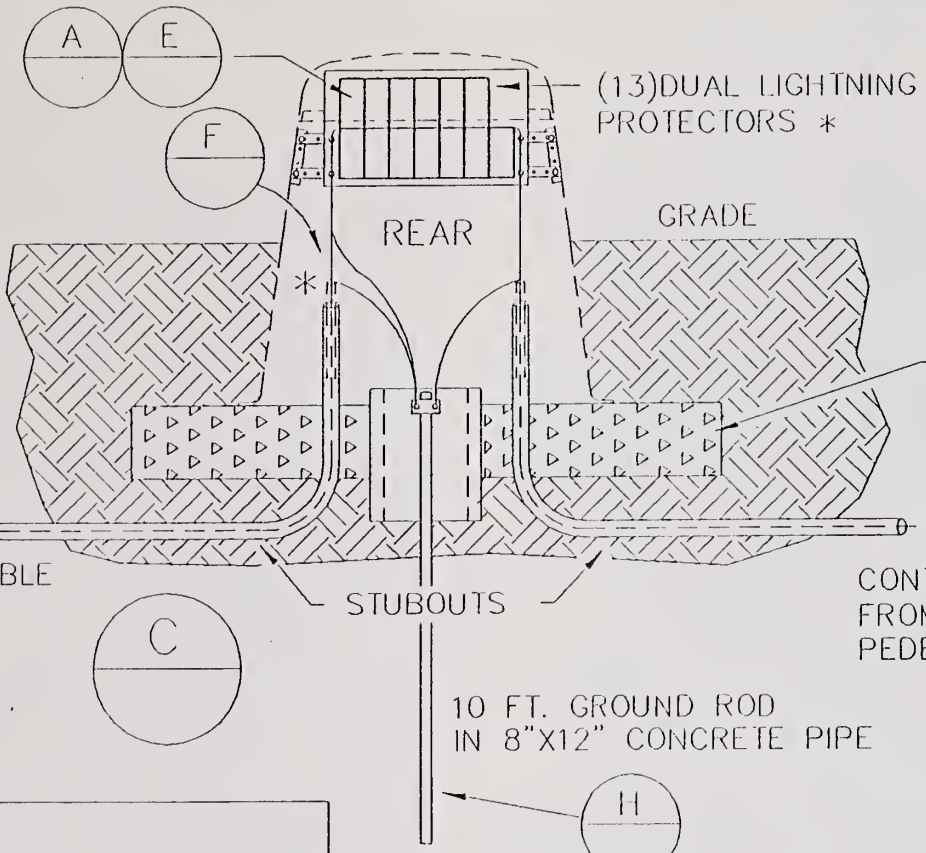
CONTROL CABLE LIGHTNING PROTECTOR CONNECTIONS

ELECTRICAL DETAILS

H.P.	MCP AMPS	#2 HEATER (START)	#1 & #3 HEATER (RUN)	SCuf	RCuf	F.L.A.
1/3	7	K29	K29	53 220V	–	3.5
1/2	15	K34	K34	71 220V	–	4.8
3/4	15	K39	K39	103 220V	–	6.4
1	15	K43	K43	126 220V	–	8
1 1/2	15	K23	K49	126 220V	10 370V	9.2
2	30	K28	K50	126 220V	20 370V	10
3	30	K37	K56	250 220V	35 370V	14
5	50	K50	K63	259 220V	15 (4) 370V	23

230V, 1Ø SUBMERSIBLE OIL FILL PUMP MOTORS MOTRDA .DWG

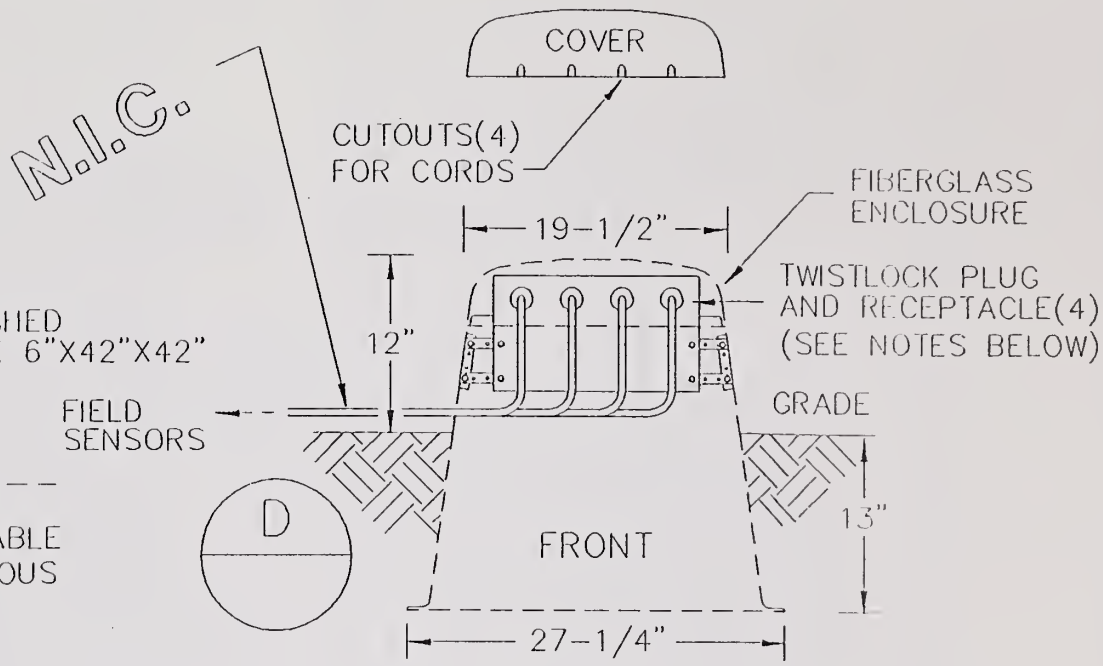
230V, 1Ø SUBMERSIBLE WELL PUMP MOTORS MOTRDA.DWG

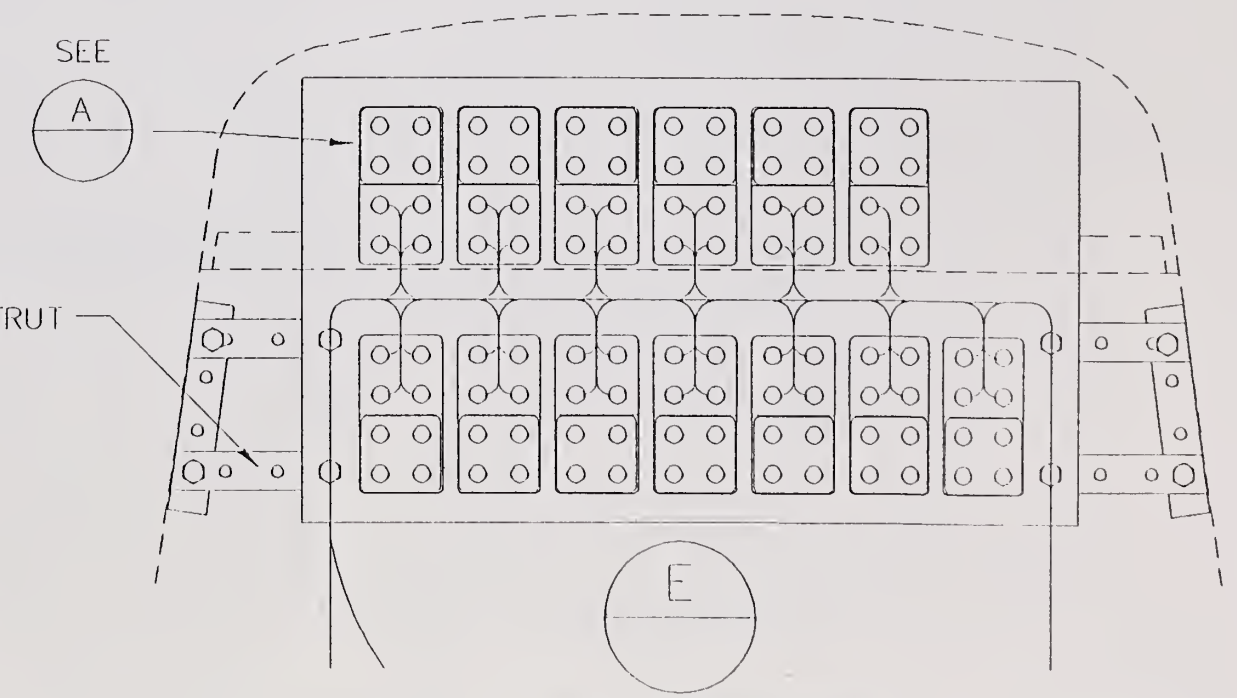


NOTE:

* GND CONTROL CABLE SHIELDS & LP'S TO ROD

MOUNT RECEPTACLES AND LIGHTNING PROTECTORS ON (2) 14.75" X 8.25" X .0625" ALUMINUM PLATES, FASTEN TO UNISTRUT FRAME.

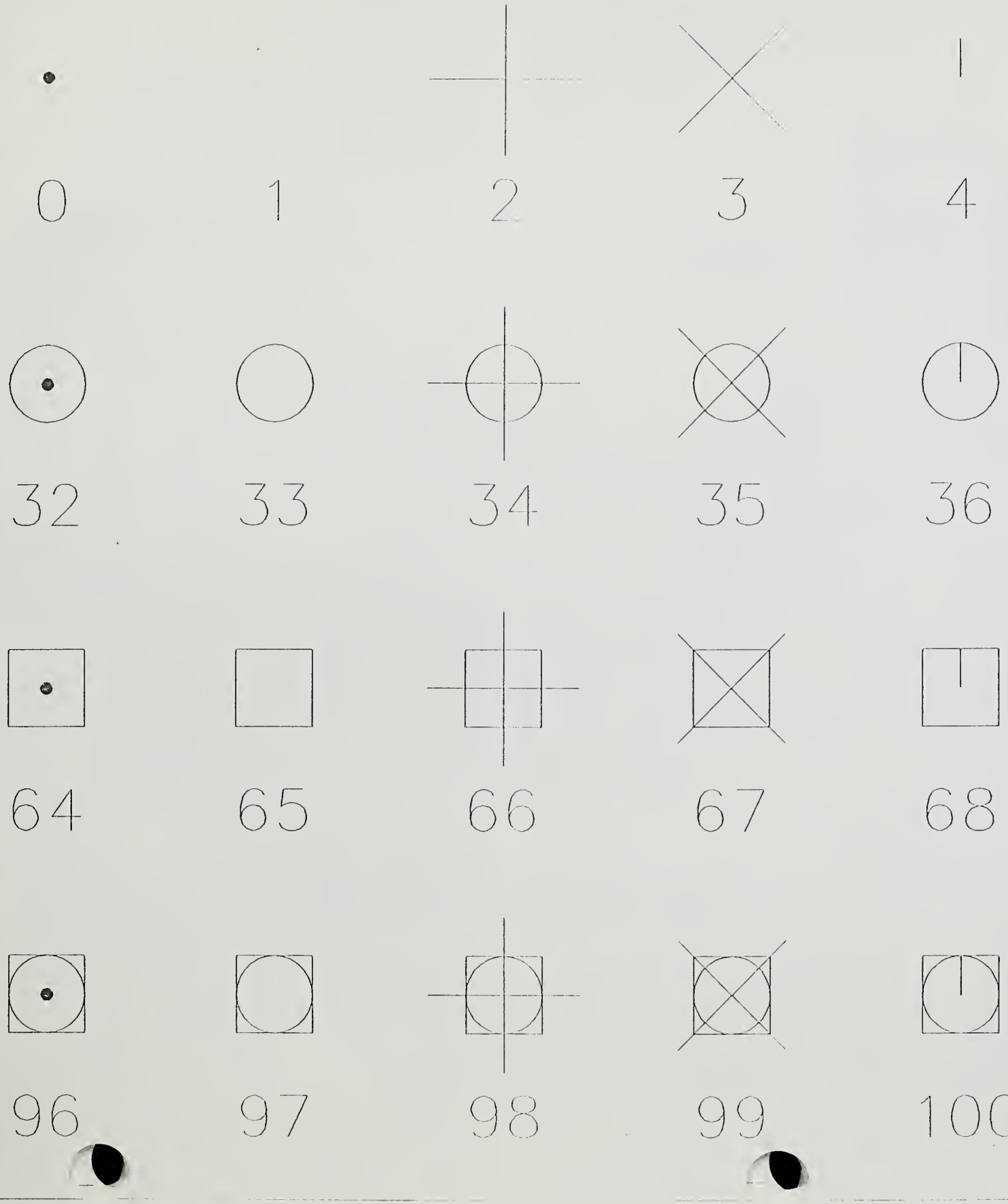




B PEDESTAL FOR FIELD SENSORS (6 REQUIRED)

NO SCALE

PEDESTAL.DWG
3-12-87
REV.8-10-87



3-30-88

POINTS.DWG

36.00" X 22.6"

CONTROLS PROTOTYPE

PLOT 1-1

ON A 36" X 24" SHEET

THIS DRAWING CONTAINS ES001-ES130 AND ES500-LS504

IN BLOCK DEFINITIONS

U.S DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

DRAWN ____ DATE
DESIGNED ____ DATE
CHECKED ____ DATE
APPROVED ____ DATE

PROTO-C.DWG

SHT 1 OF

ELECTRICAL PROTOTYPE

PLOT 1=24 FOR 1/2"=1 FT.

THIS DRAWING CONTAINS ES201-ES337 IN BLOCK DEFINITIONS

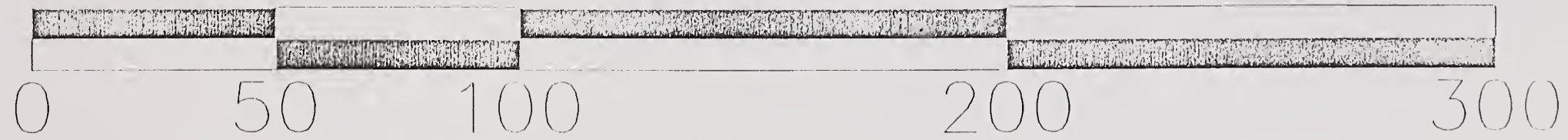
U.S DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

DRAWN ____ DATE
DESIGNED ____ DATE
CHECKED ____ DATE
REVIEWED ____ DATE

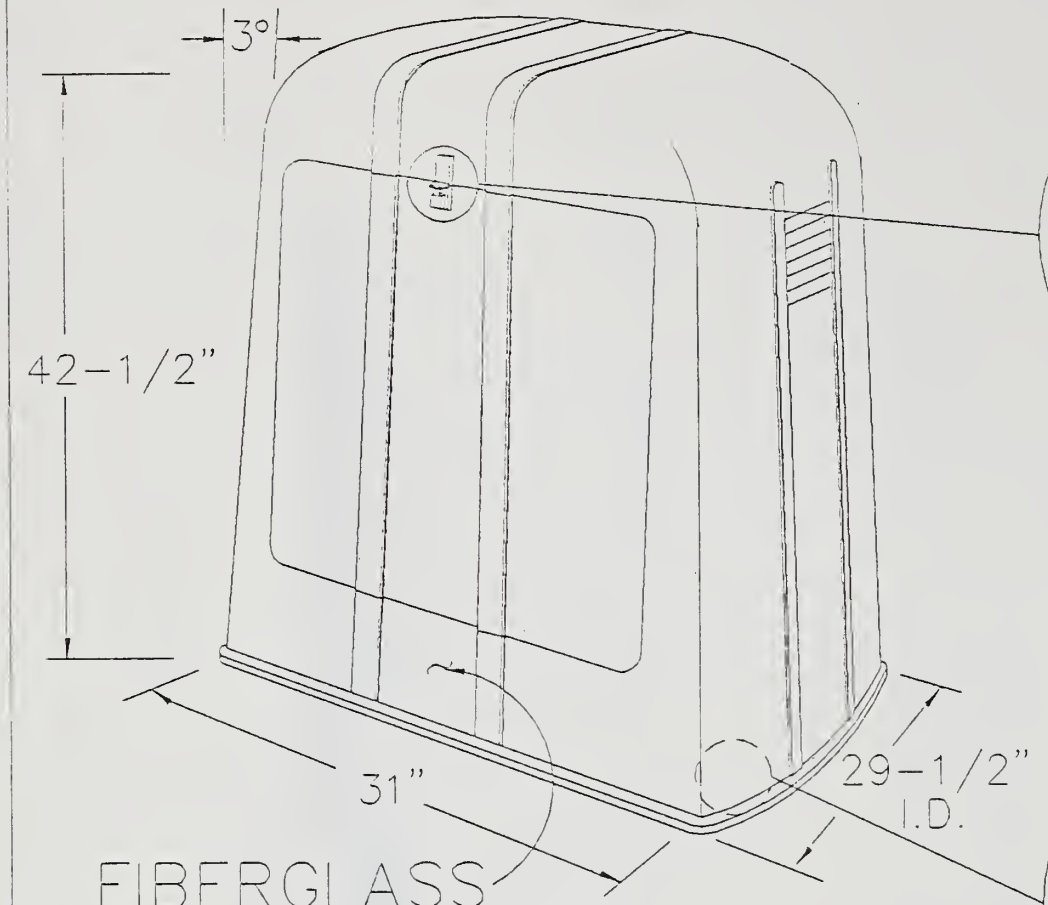
PROTO-E.DWG

SHT.
OF

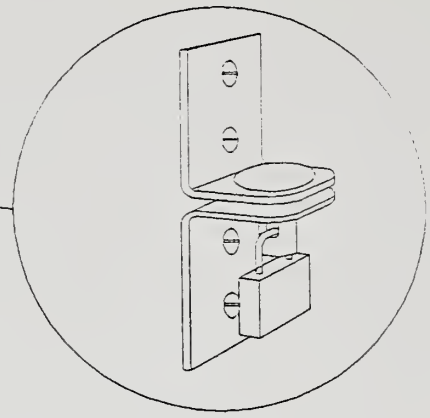


SCALE IN FEET: 1" = 100'

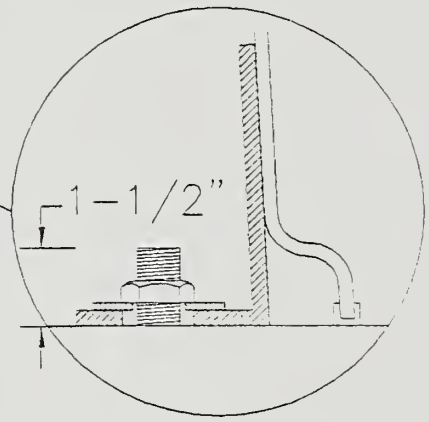
SCALEBAR.DWG



FIBERGLASS
TRANSCLOSURE

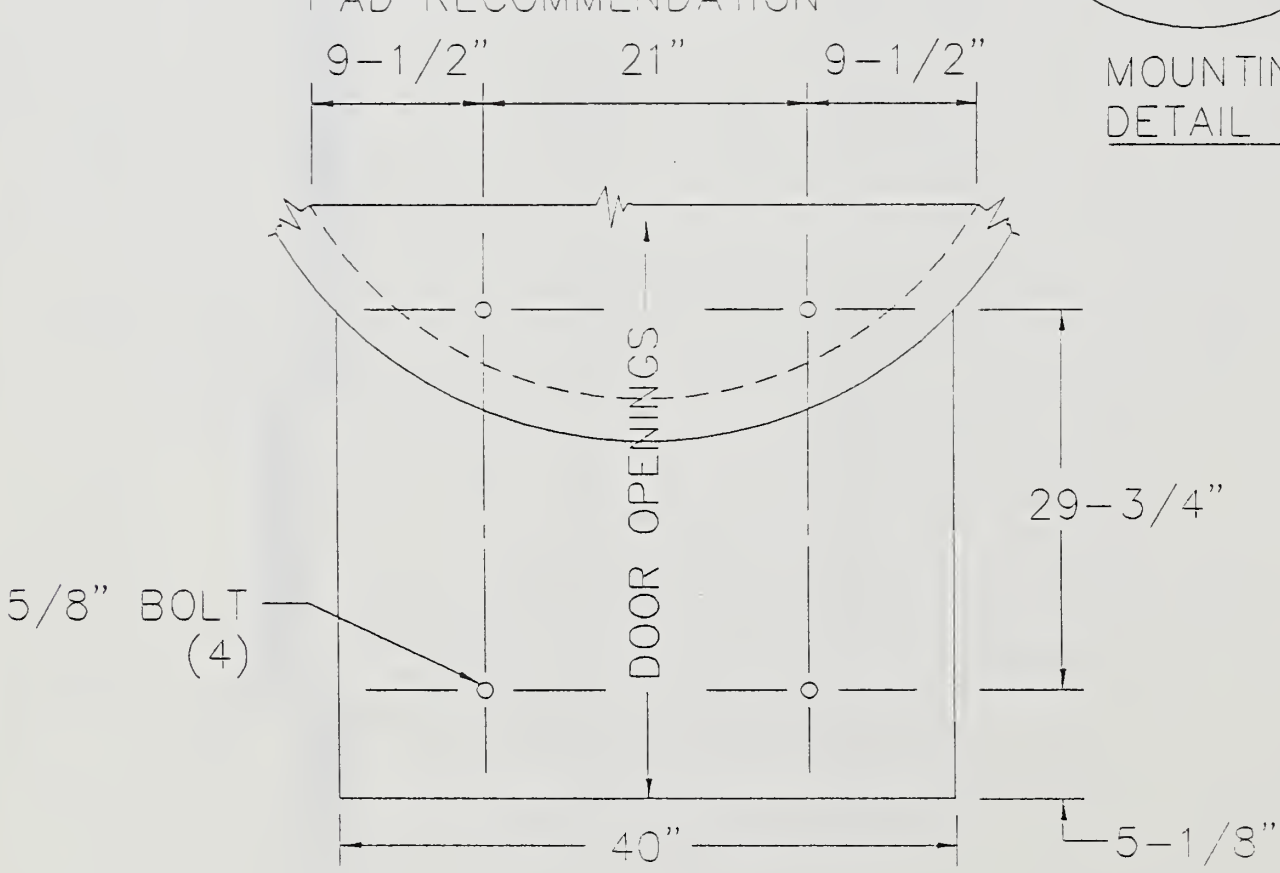


LOCK DETAIL



MOUNTING
DETAIL

PAD RECOMMENDATION



TRANSCLOSURE DETAILS

TRANSCLO.DWG 2-20-87 NO SCALE

WIRE SIZES & COLOR CODE

COLOR CODE

DC +RED −BLUE
24VAC YELLOW, COMMON WHITE

POWER WIRING 115VAC AND ABOVE
L1 BLACK
L2 VIOLET (240VAC WILD LEG ORANGE)
L3 BROWN
NEUTRAL GREY
GROUND, ALL VOLTAGES, GREEN

*UTILIZE ORANGE POWER WIRE ON
120V/240V DELTA SYSTEMS

WIRE SIZE

CONTROL WIRE 14AWG MINIMUM

POWER WIRE

TO AND FROM STARTERS

STARTER SIZE	1	2	3	4
WIRE SIZE (AWG)	10	8	3	1

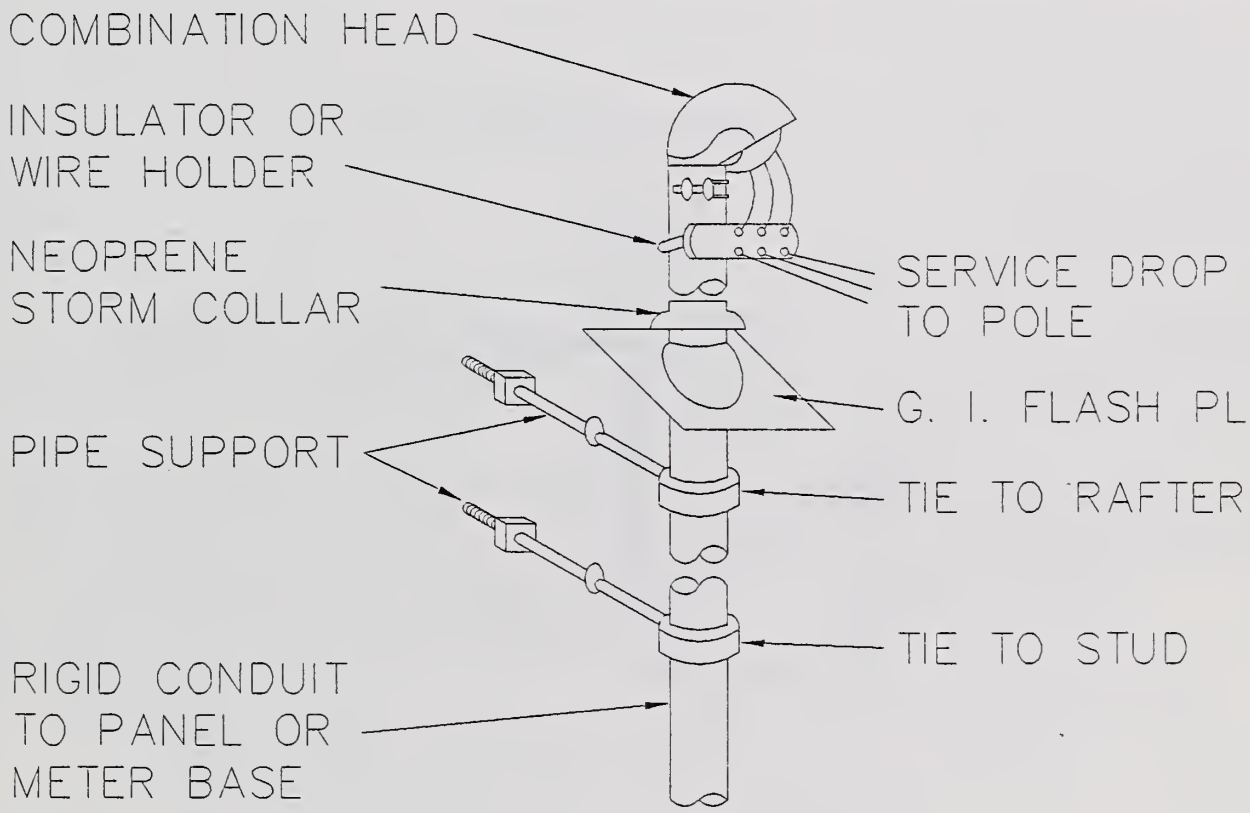
FROM MAIN CIRCUIT BREAKER

40 AMPS	#8 AWG
25−30	#10
15−20	#14
10	#14
5	#14

FIELD WIRE SIZE	TERMINAL
24 − 19 AWG	BUCHANAN #0241
18 − 6 AWG	BUCHANAN #0243
4 − 1 AWG	BUCHANAN #824
#1/0 − UP	BUCHANAN #417

WIRETABL.DWG

ELECTRICAL DETAILS



NOTE: GUY AS REQUIRED FOR LOCAL CODES

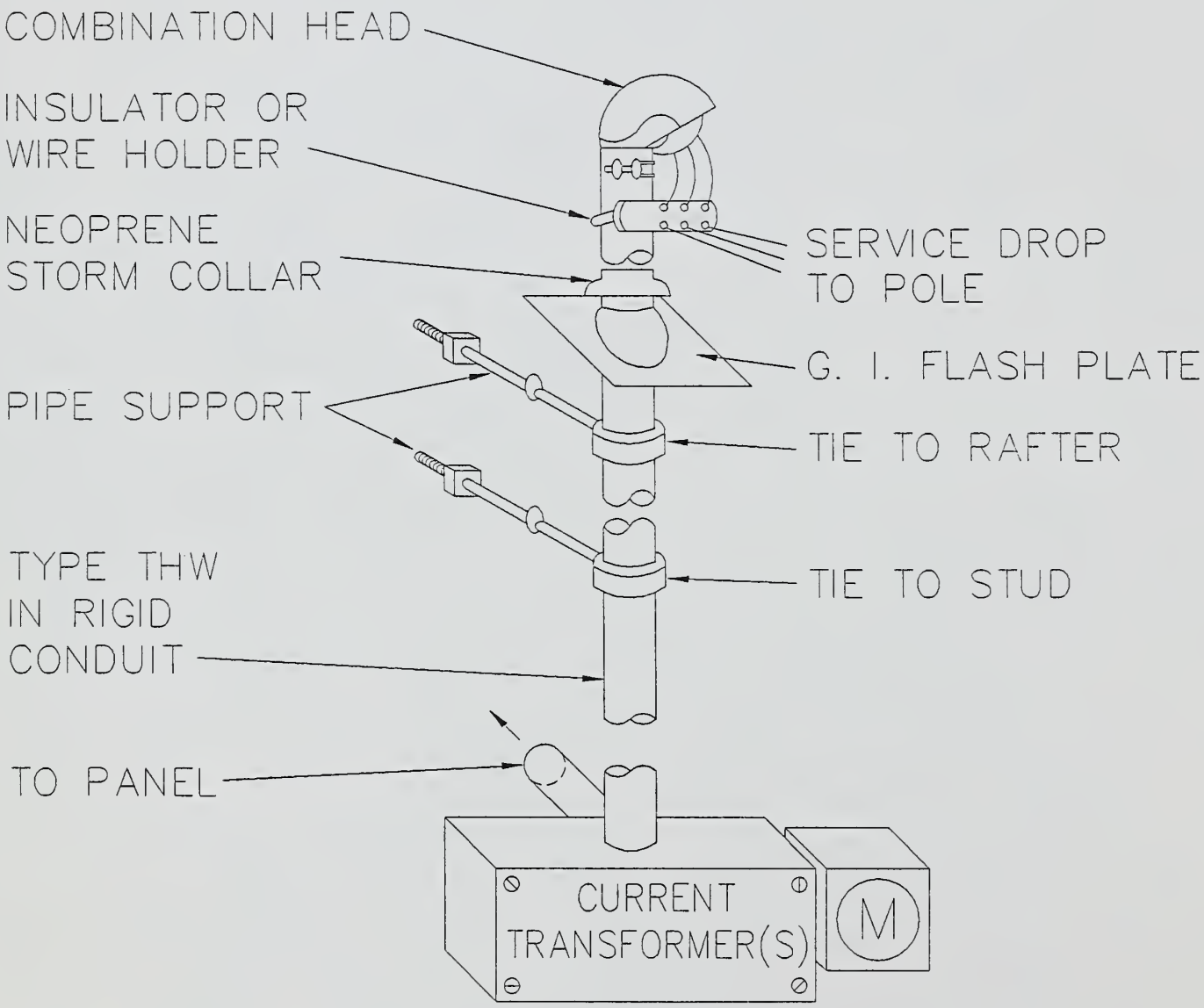
IN LIEU OF NEOPRENE STORM COLLAR, CONTRACTOR MAY USE SOLDERED 4 LB. LEAD COLLAR. SOLDER AREA SHALL BE PAINTED WITH A RUST INHIBITIVE PAINT.

OVERHEAD SERVICE ENTRANCE

NO SCALE ED000001 12 SEP 85

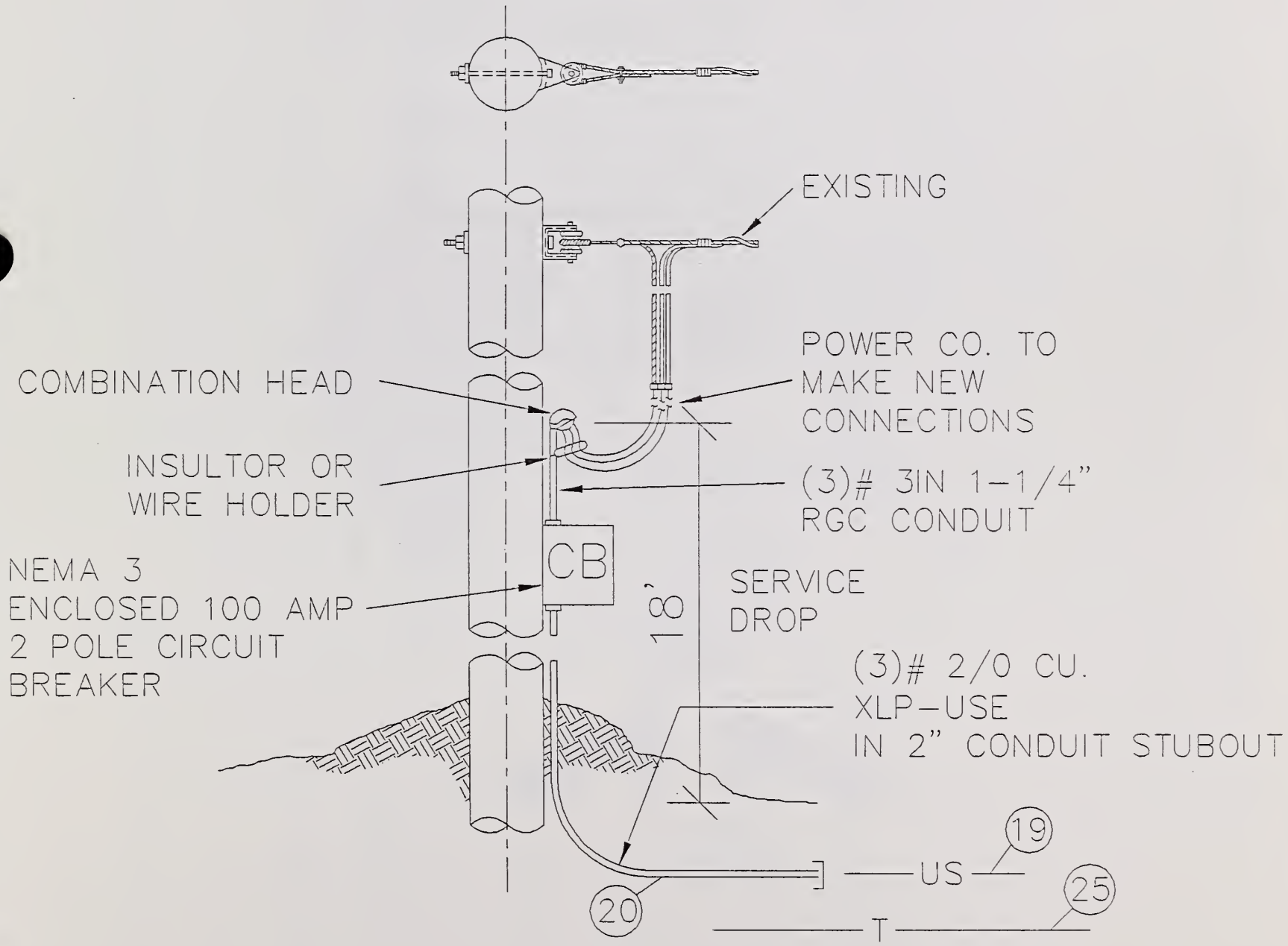
NOTE: GUY AS REQUIRED FOR LOCAL CODES

IN LIEU OF NEOPRENE STORM COLLAR, CONTRACTOR MAY USE SOLDERED 4 LB. LEAD COLLAR. SOLDER AREA SHALL BE PAINTED WITH A RUST INHIBITIVE PAINT.



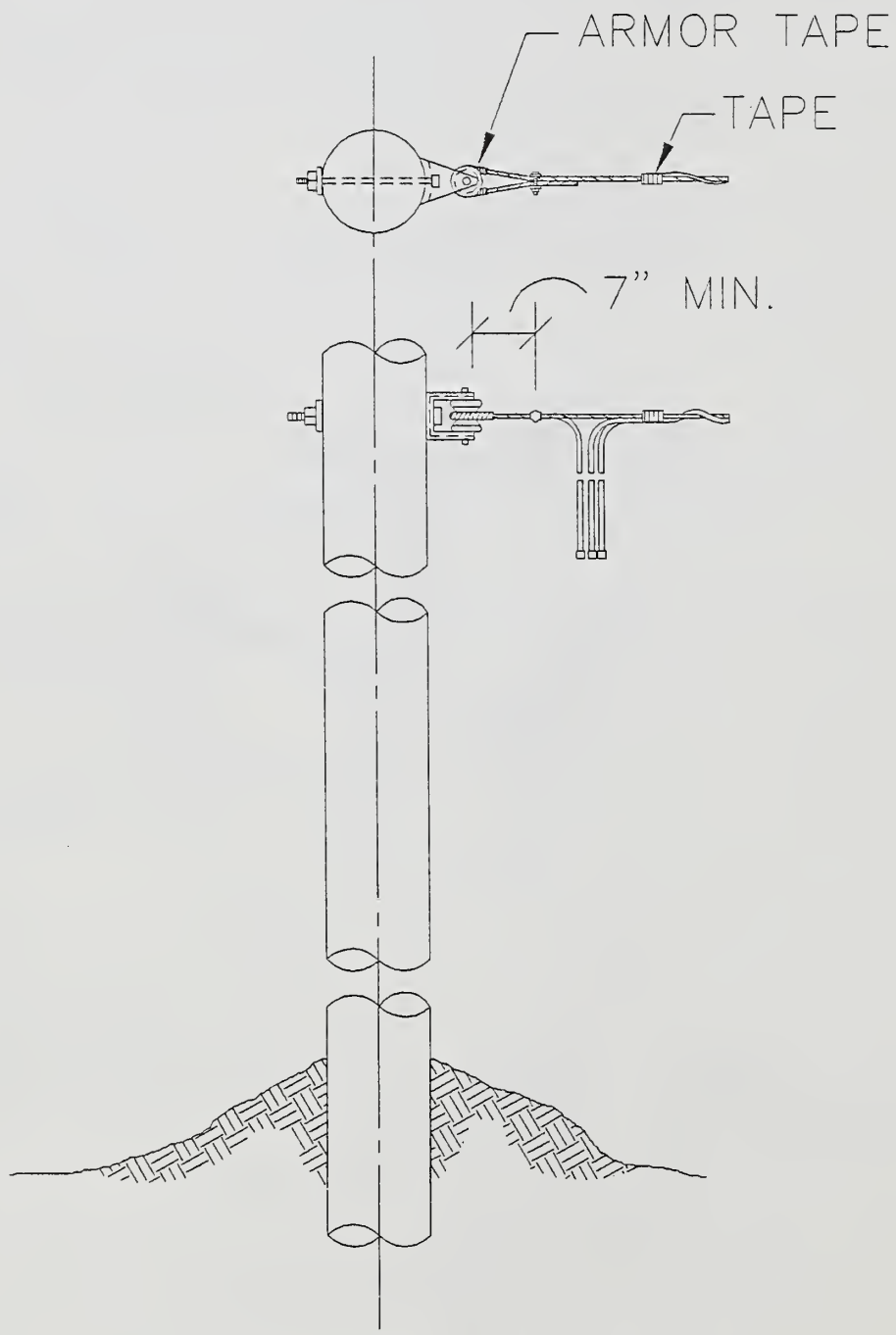
OVERHEAD SERVICE ENTRANCE

NO SCALE ED000002 12 SEP 85



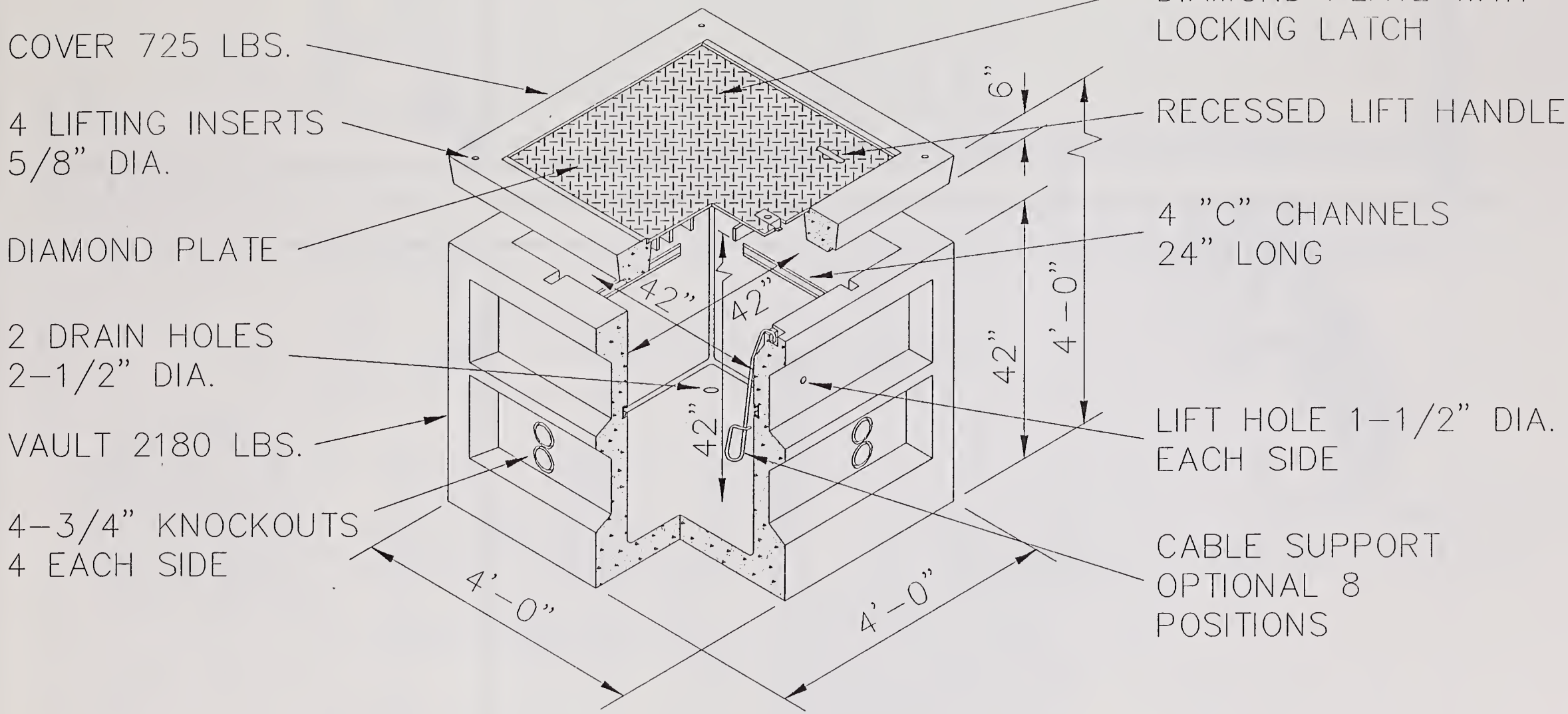
SERVICE CONNECTION DETAIL

NO SCALE ED000003 16 SEP 85



SERVICE CONNECTION DETAIL

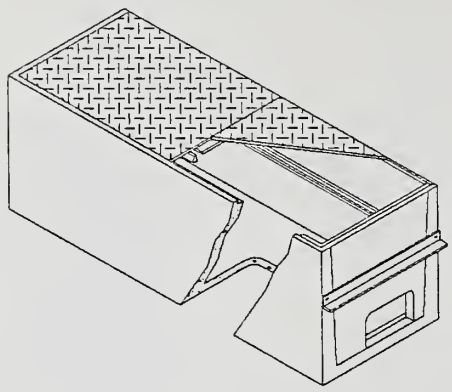
NO SCALE ED000004 24 SEP 85

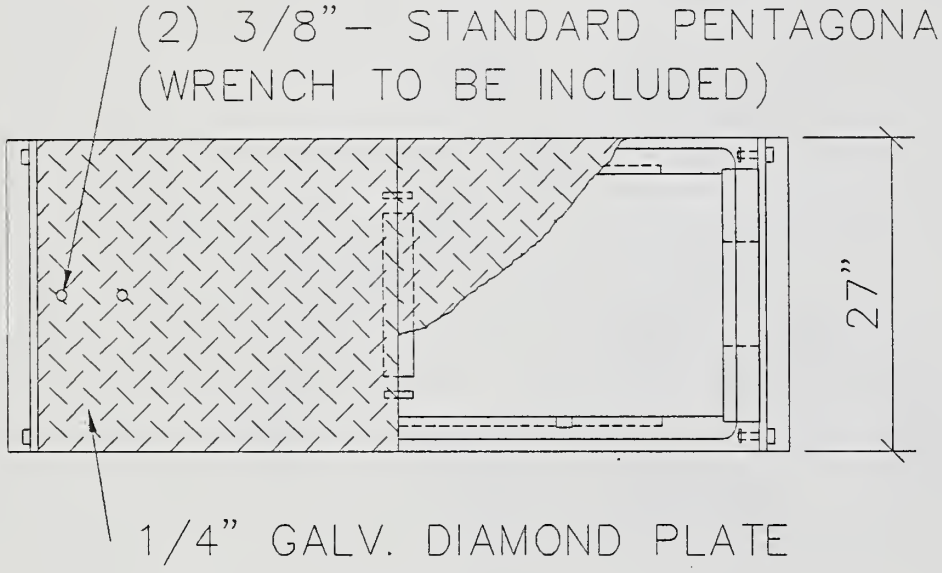


SPLICE VAULT

NO SCALE ED000005 17 SEP 85

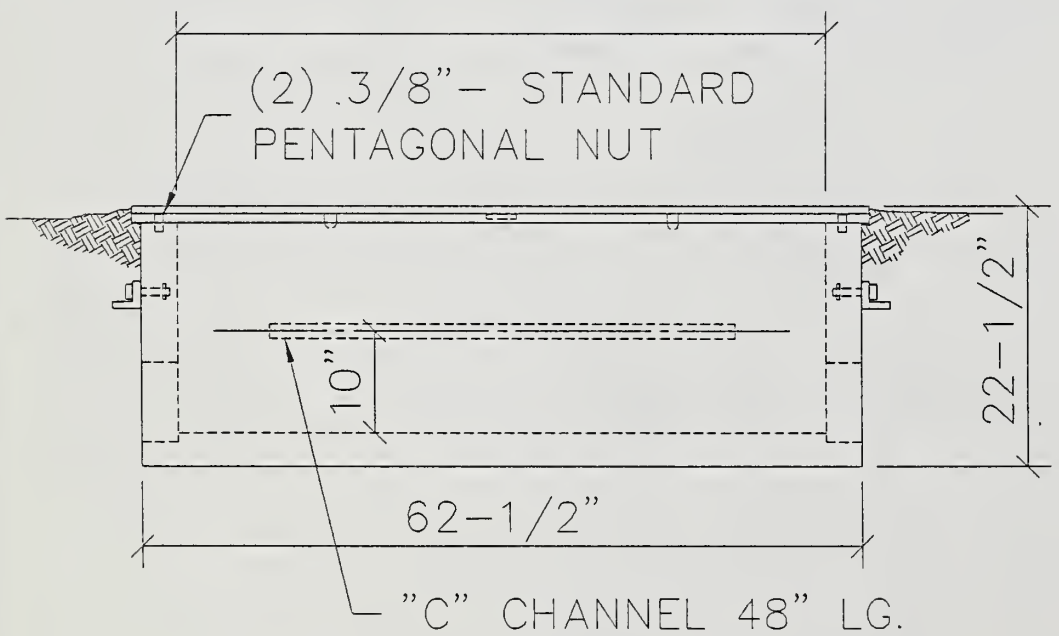
ELECTRICAL SYMBOLS

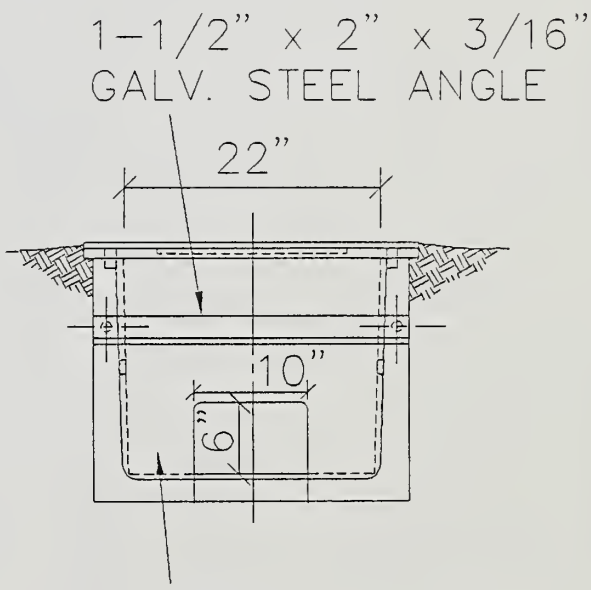




SEE

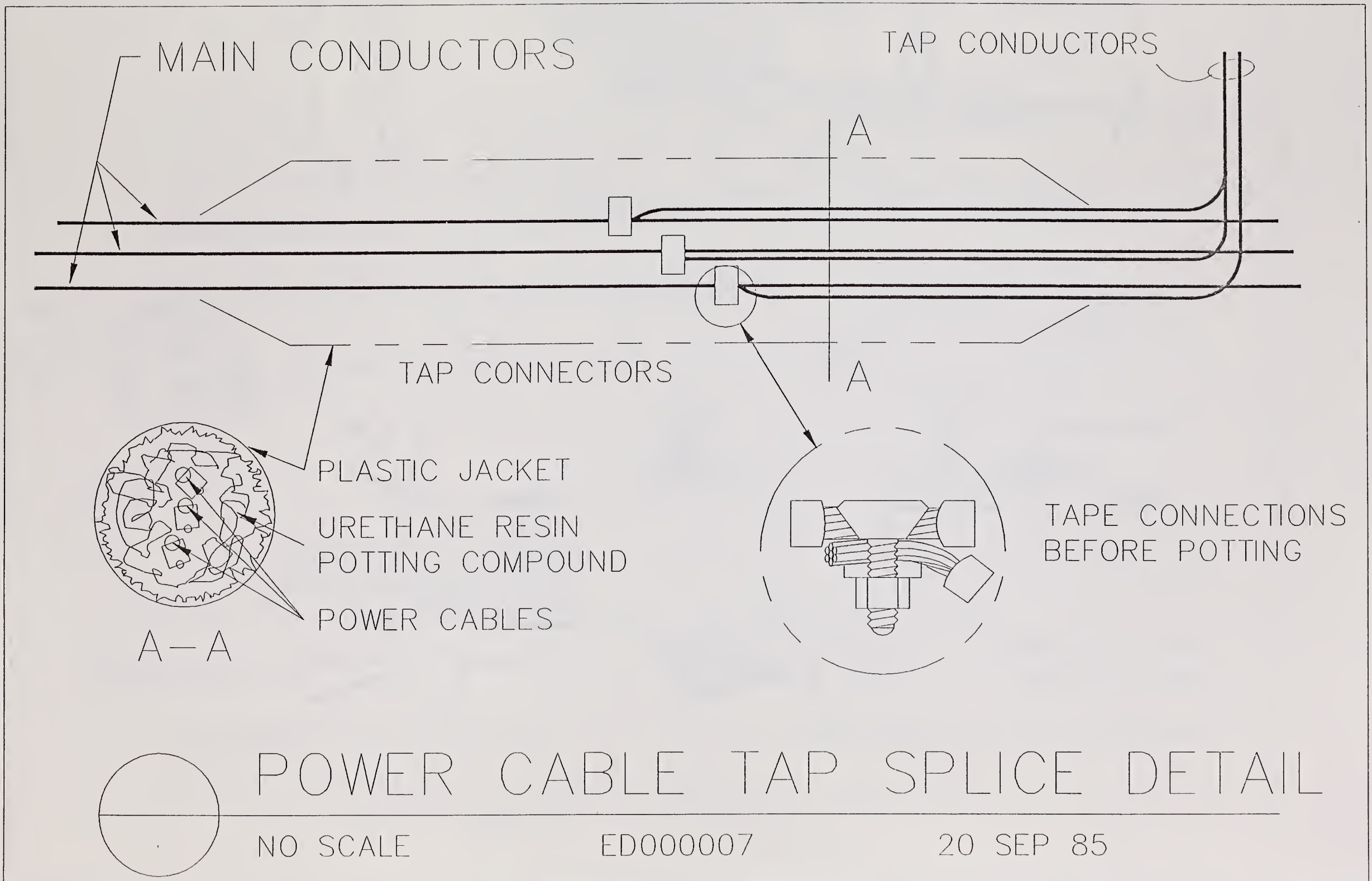
FOR SPLICE DETAIL





SPLICE VAULT DETAIL

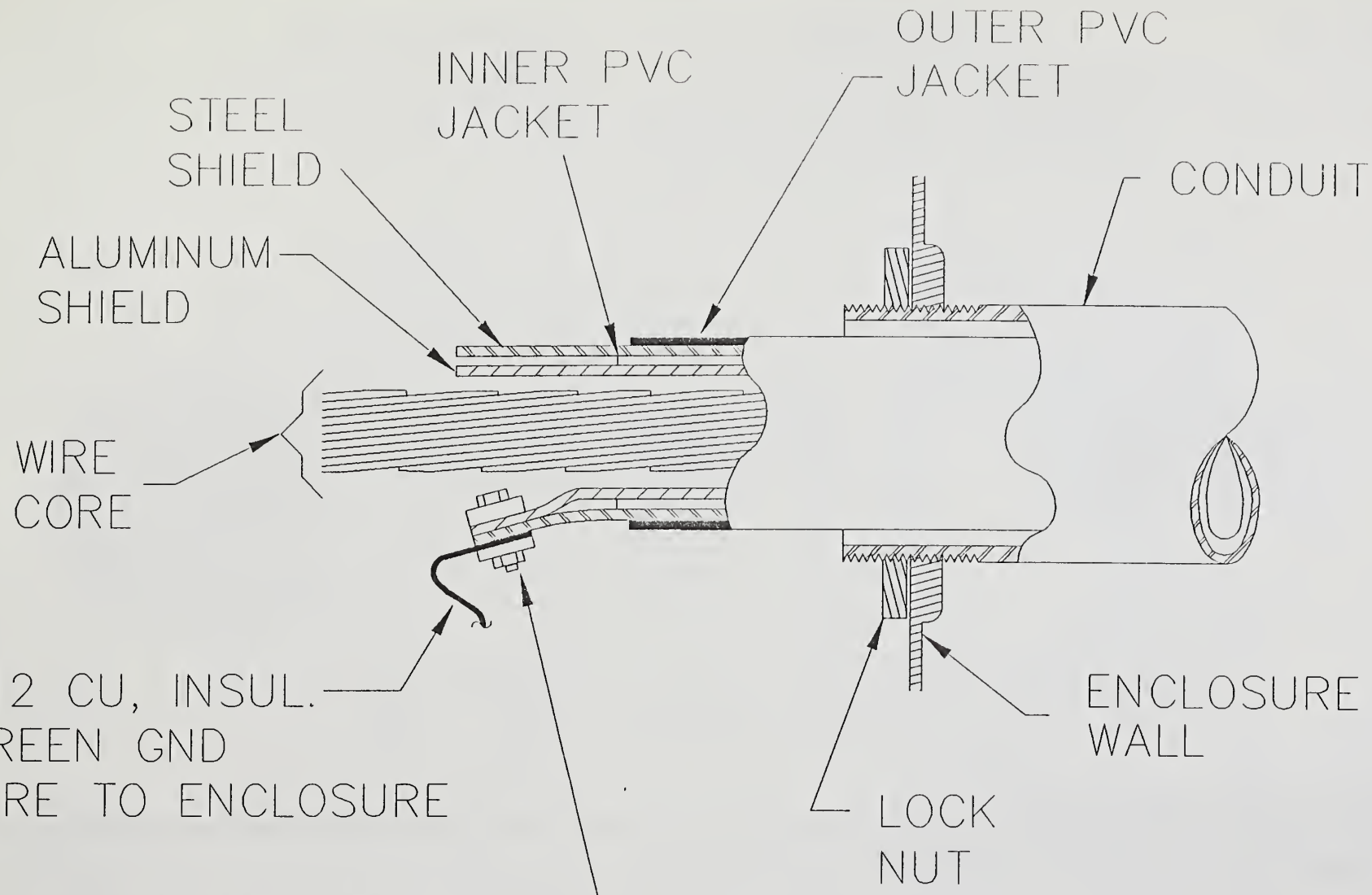
NO SCALE ED000006 19 SEP 85



POWER CABLE TAP SPLICE DETAIL

NO SCALE ED000007 20 SEP 85

ELECTRICAL SYMBOLS

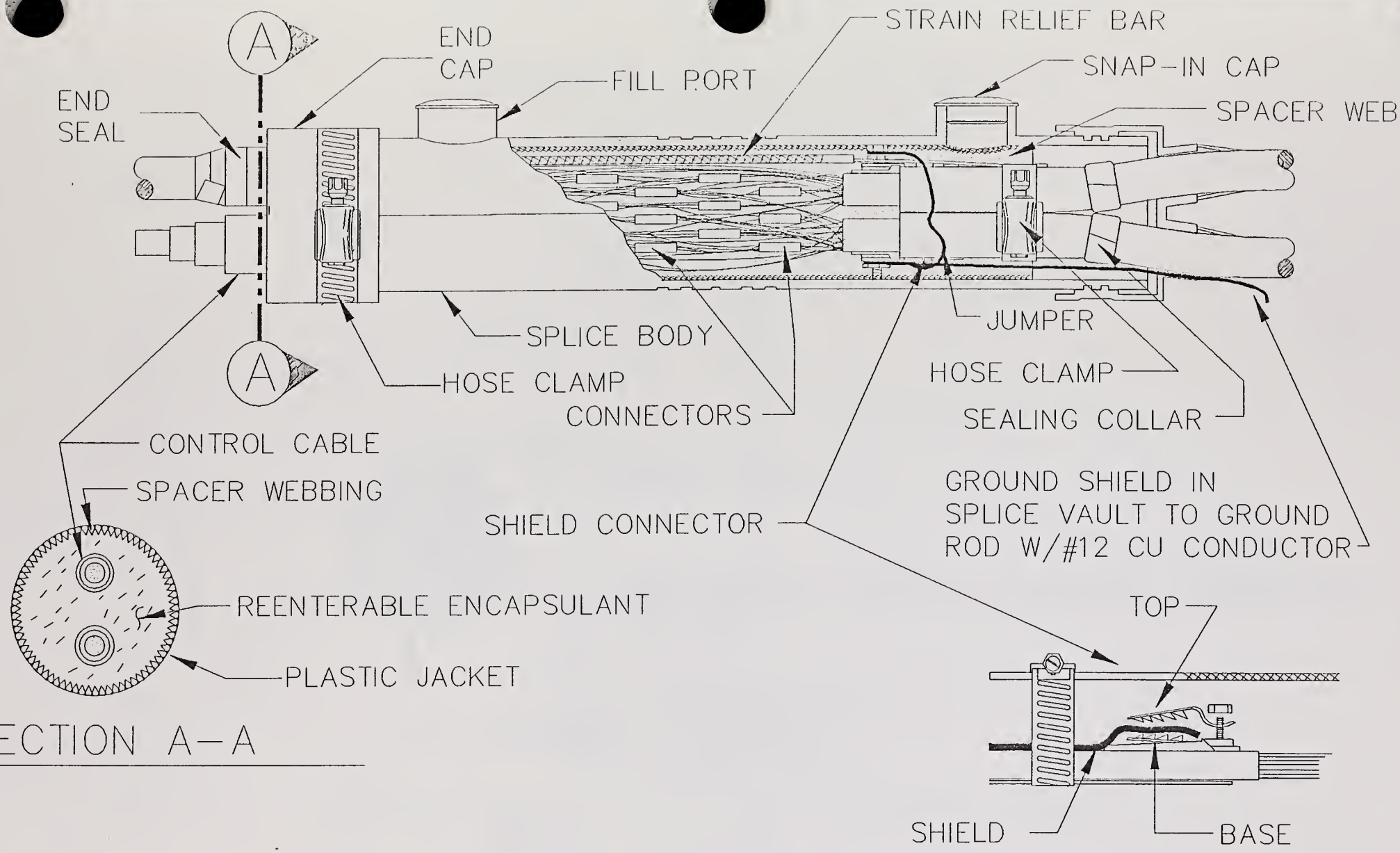


NOTE: ISOLATE SHIELDS FROM CONDUIT BY TAPING.
STRIP SHIELDS BEFORE BENDING.

CONTROL CABLE GROUNDING

NO SCALE ED000008 19 SEP 85



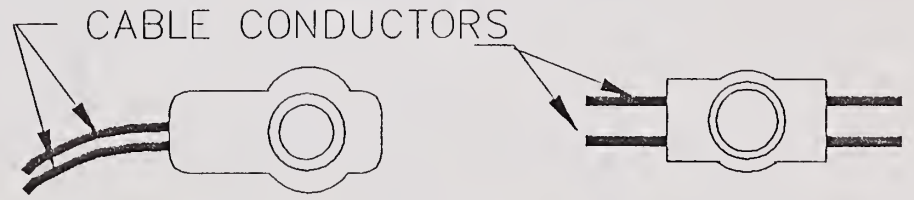


SECTION A-A

3 PORT PETROLEUM JELLY FILLED U G COMPRESSION CABLE CONNECTOR FOR 'Y' SPLICE



U G CONNECTOR FOR 'Y' SPLICE



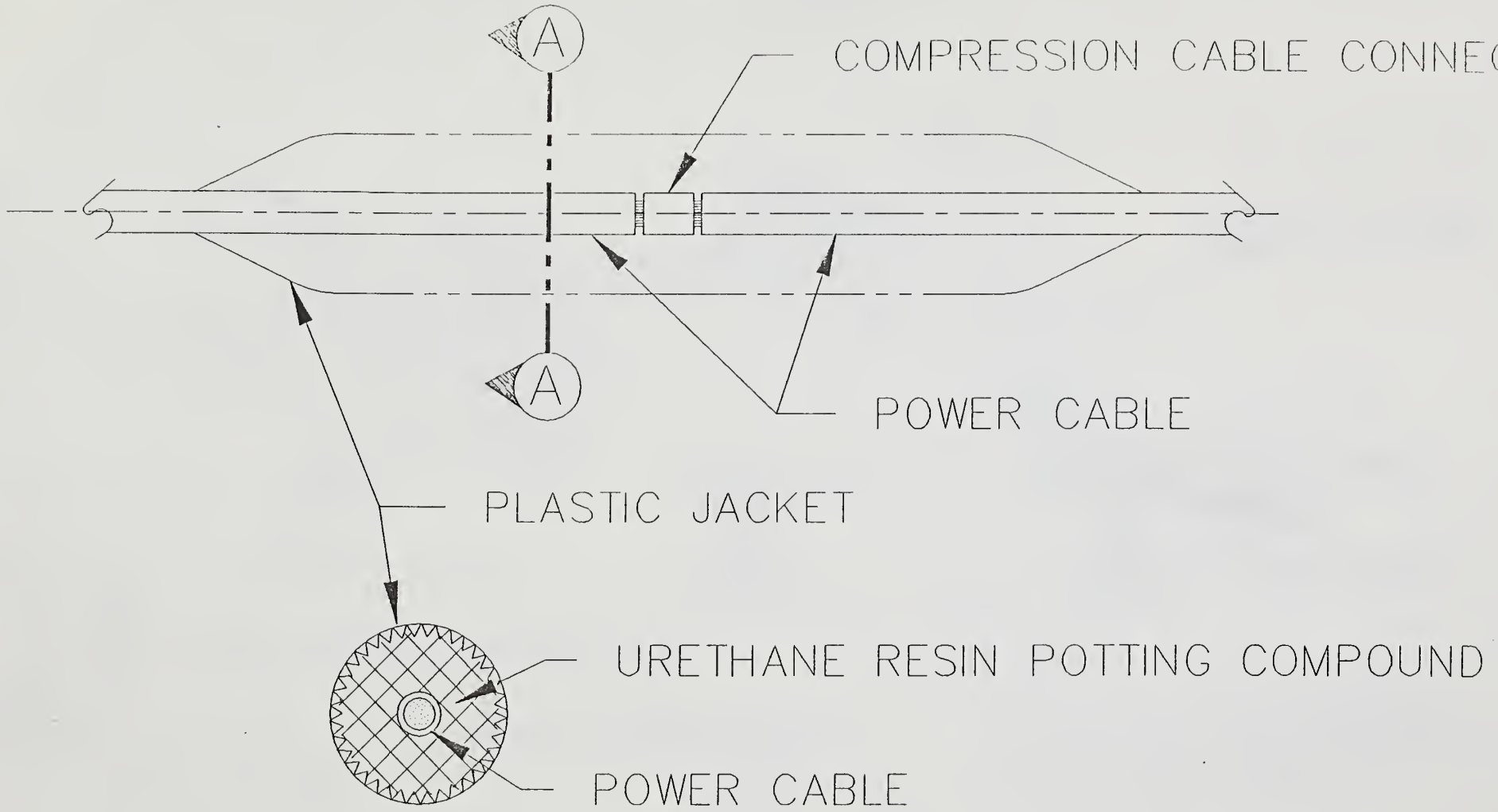
ULG CONNECTOR

UIR CONNECTOR

CONTROL CABLE SPLICE DETAIL

NO SCALE ED000009 25 SEP 85

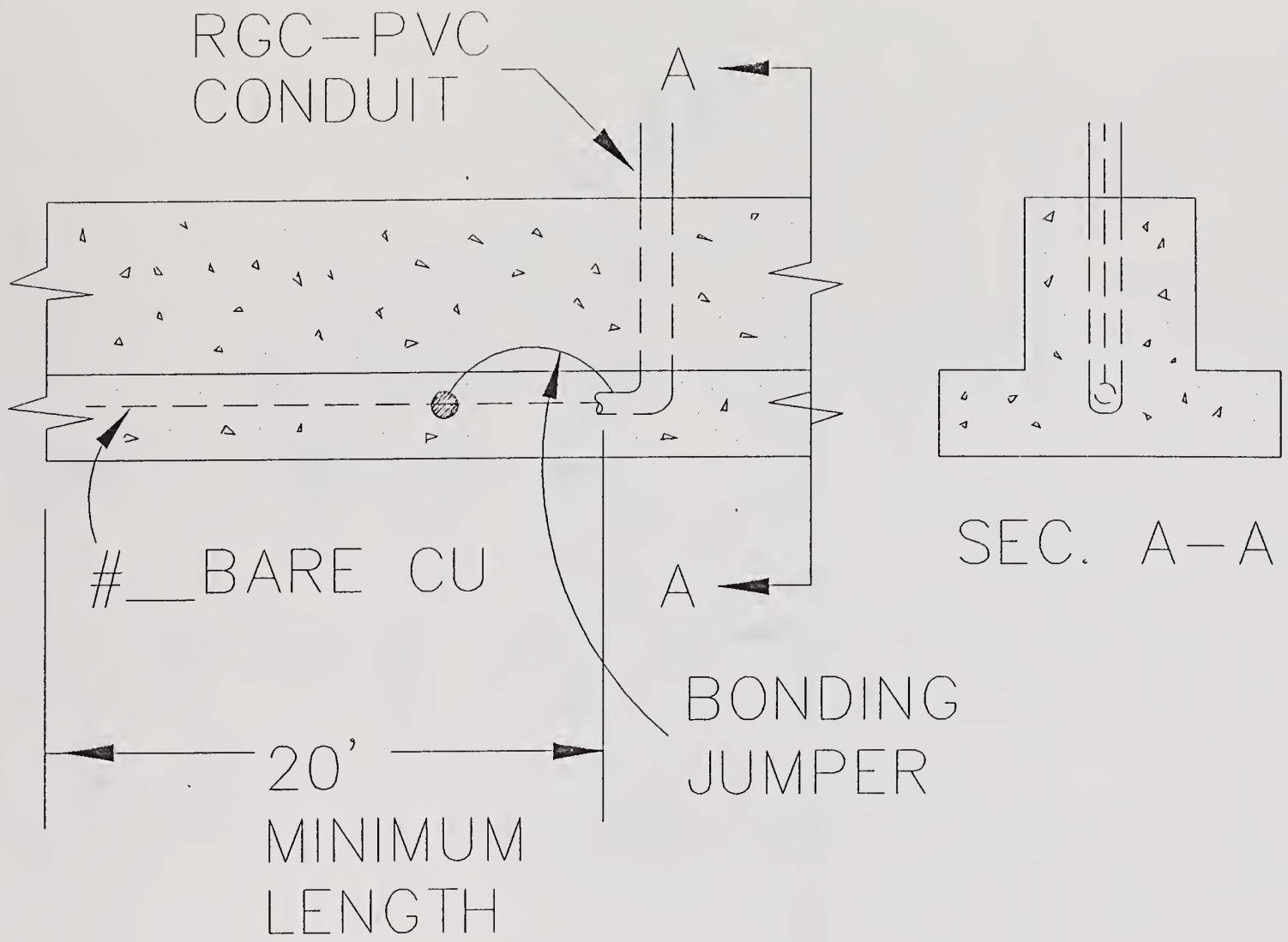
ELECTRICAL SYMBOLS



SECTION A–A

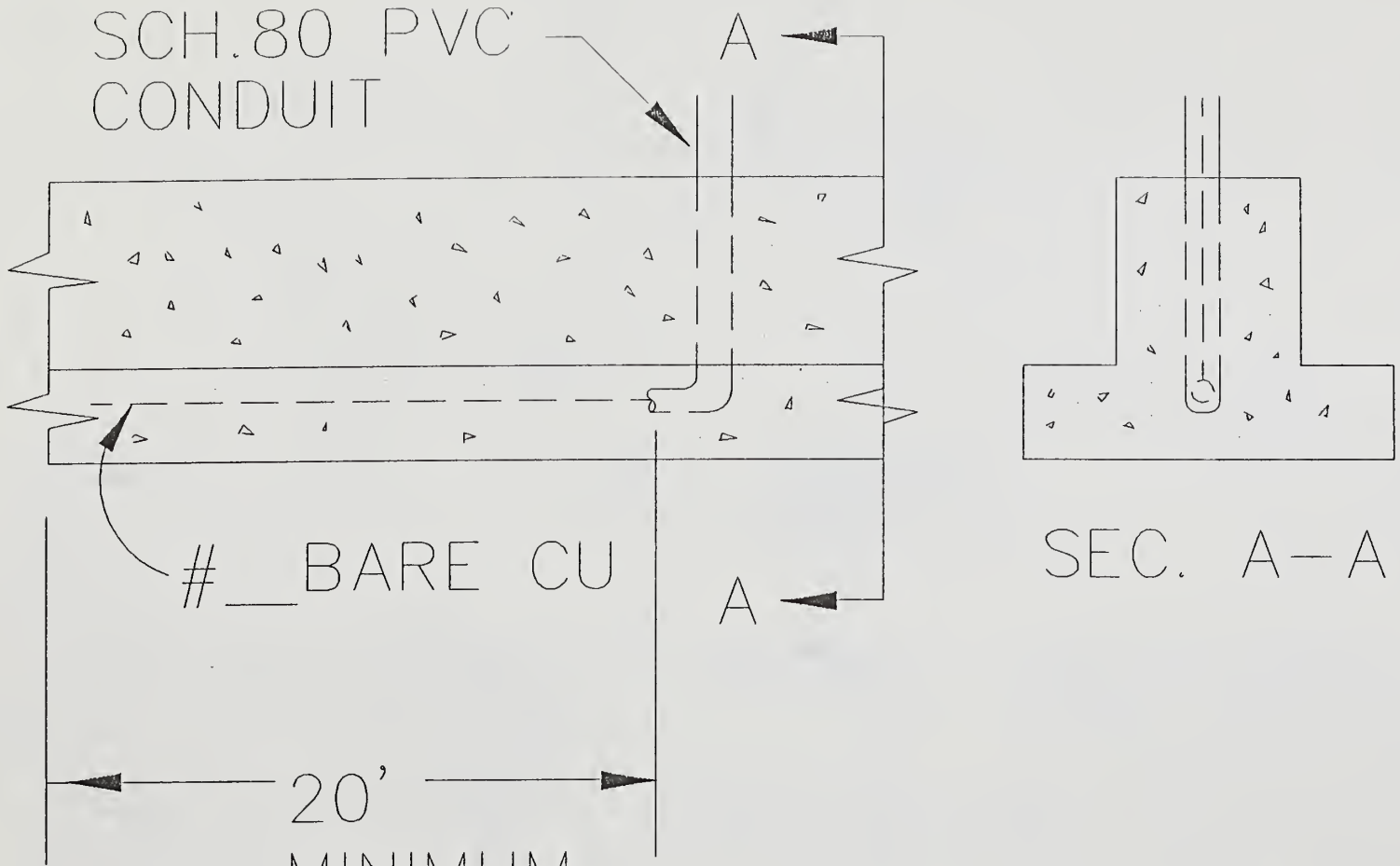
POWER CABLE SPLICE DETAIL

NO SCALE ED000010 19 SEP 85



CONCRETE FOUNDATION GROUNDING

NO SCALE ED000011
11 OCT 85

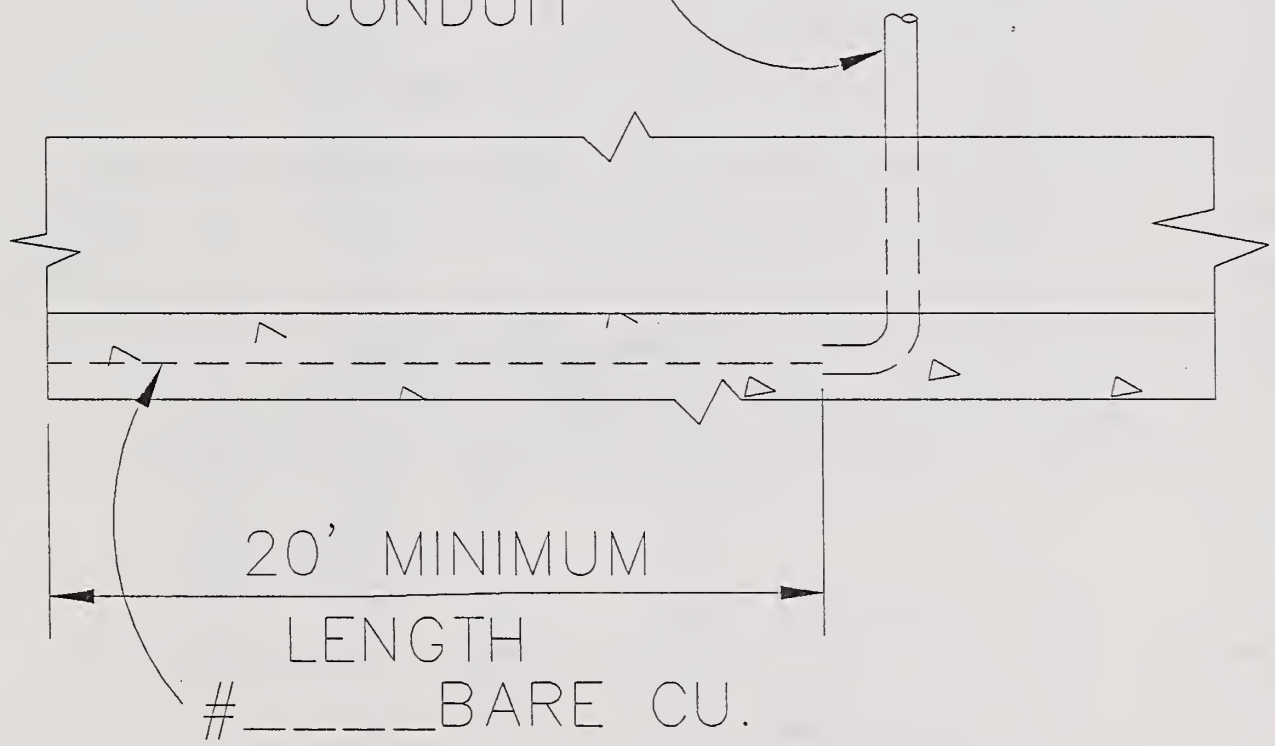


SEC. A–A

CONCRETE FOUNDATION GROUNDING

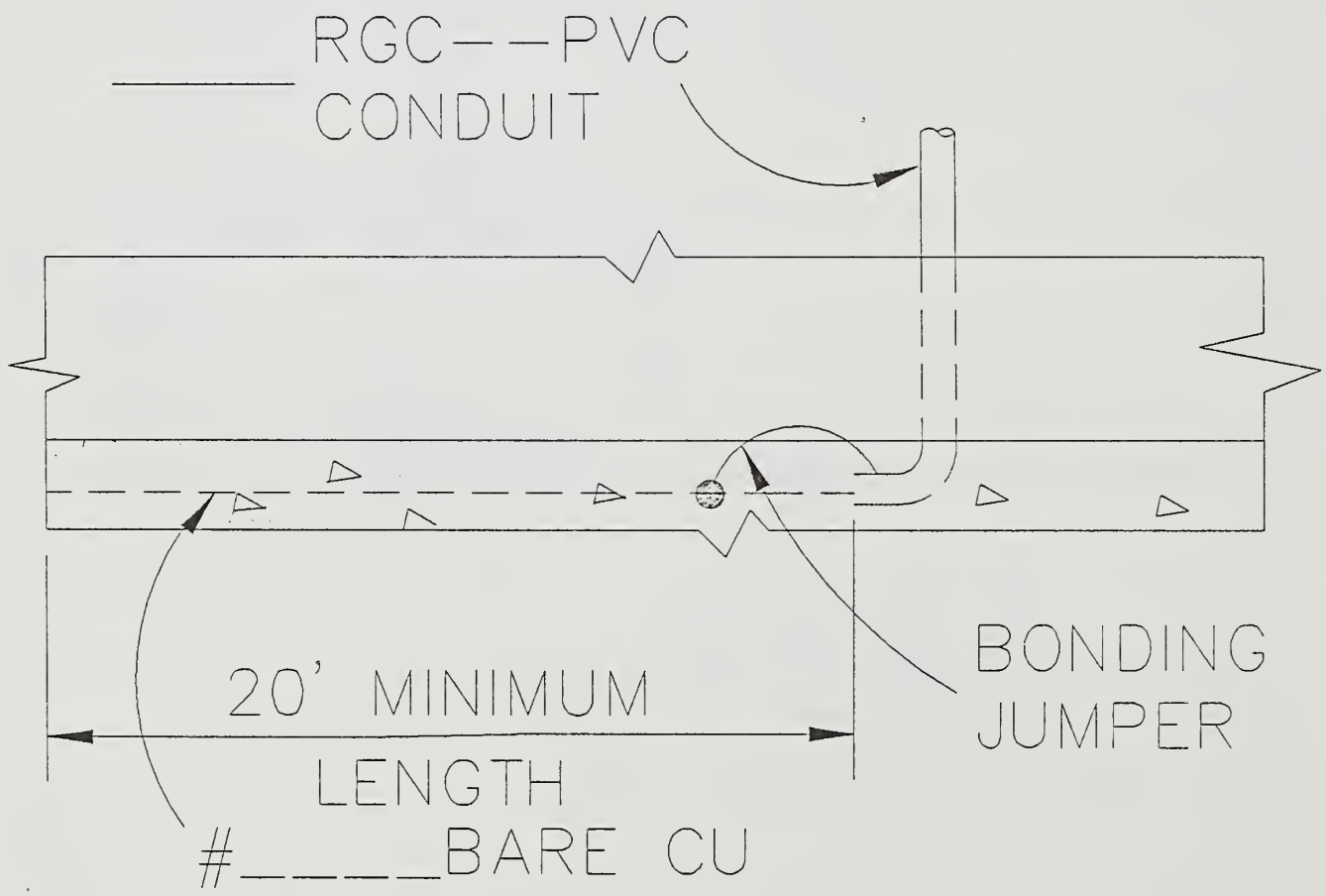
NO SCALE

ED000012
11 OCT 85



CONCRETE SLAB GROUNDING

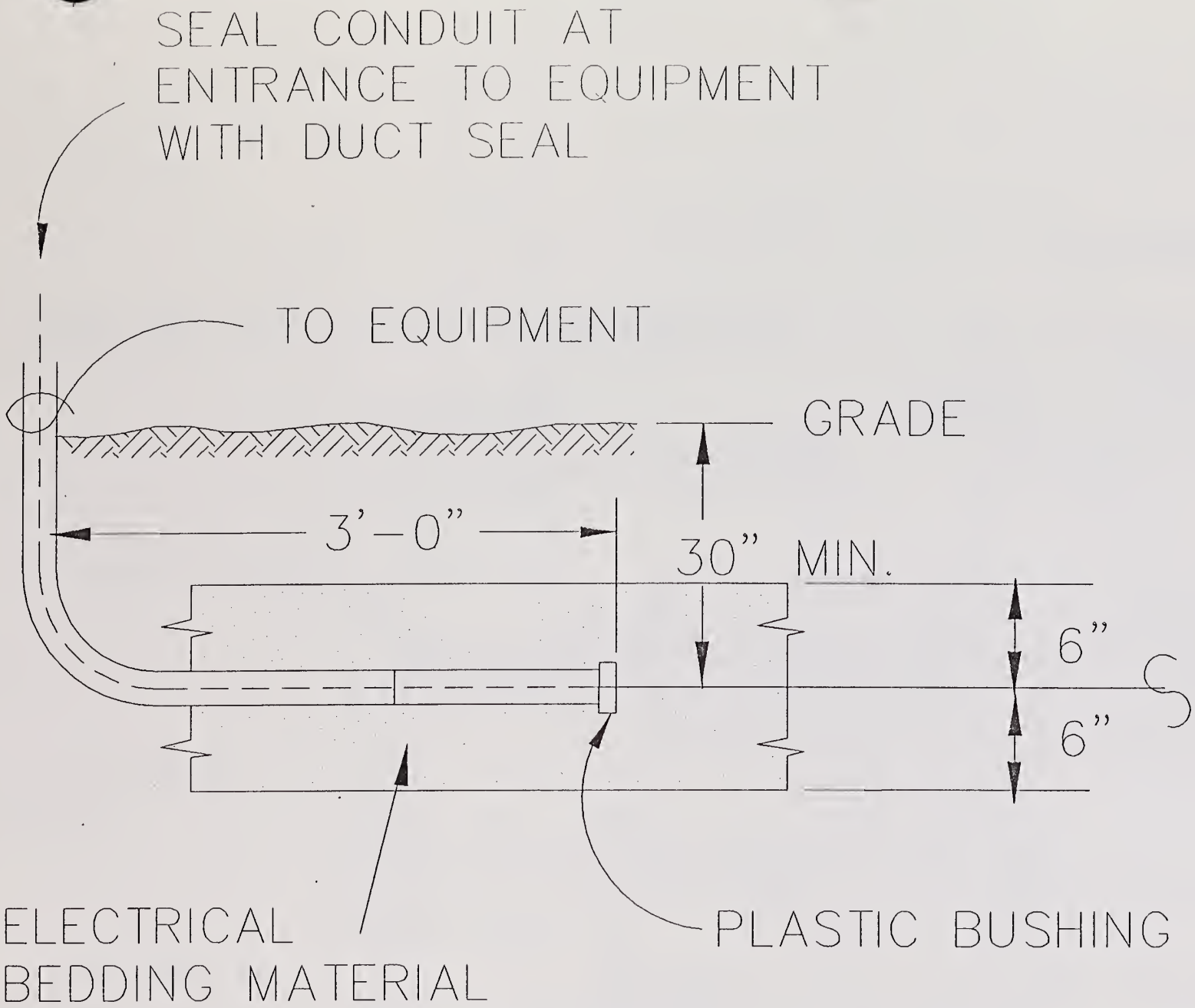
NO SCALE
ED000013
11 OCT 85



CONCRETE SLAB

GROUNDING

NO SCALE
ED0000014
11 OCT 85

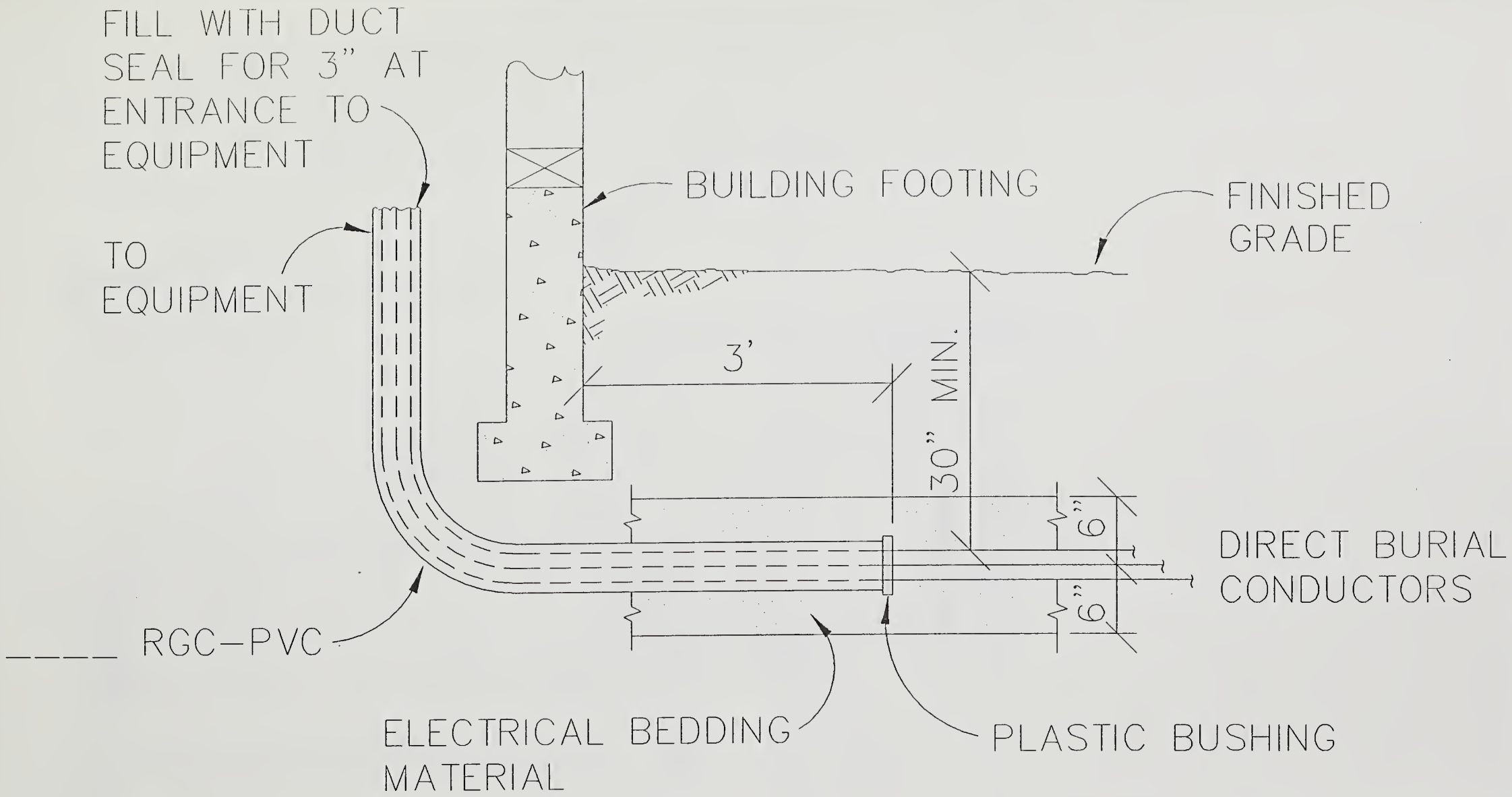


CONDUIT STUBOUT DETAIL

NO SCALE

ED000015
11 OCT 85

ELECTRICAL SYMBOLS

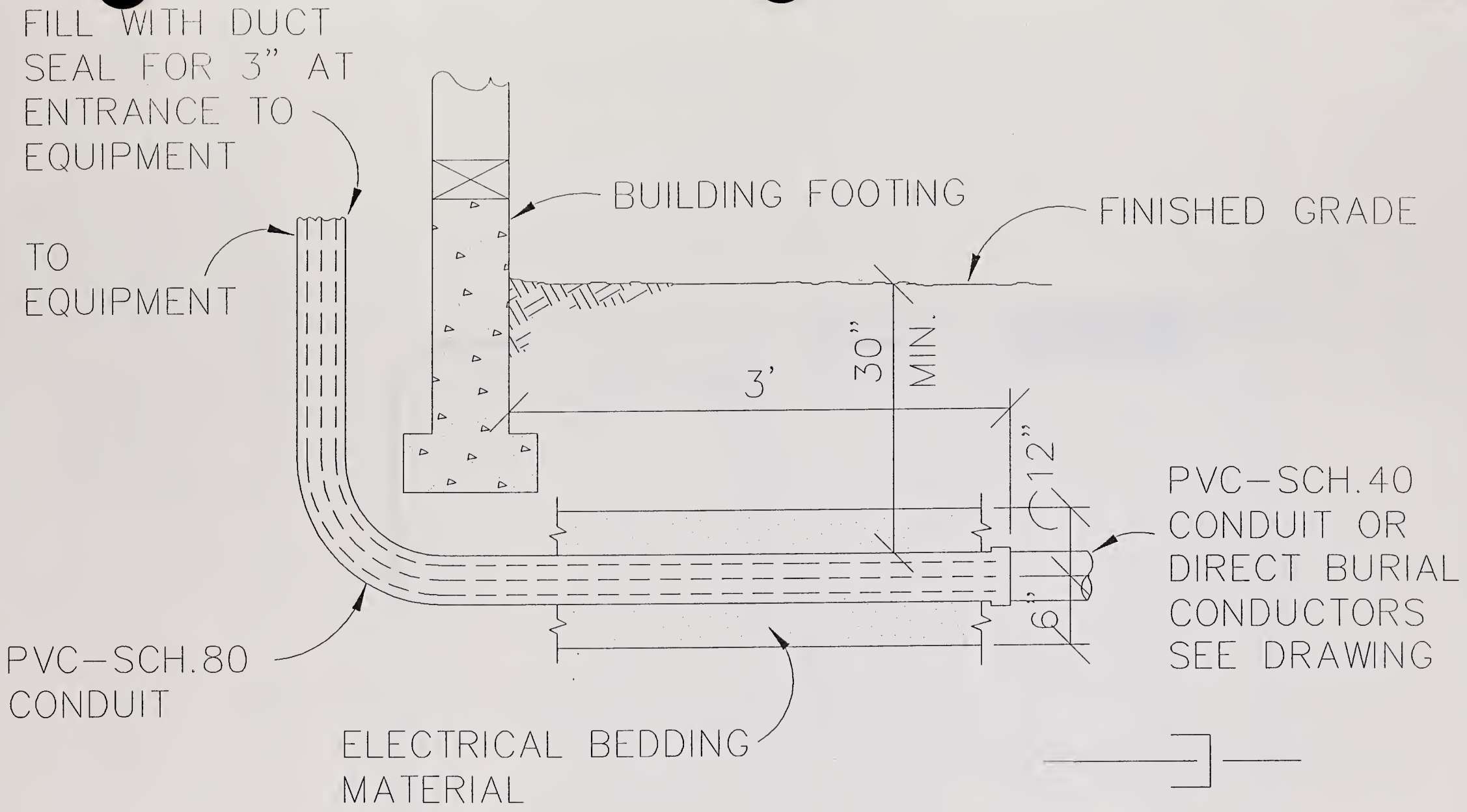


USE AT ALL CONDUIT STUBOUTS

DRAWING SYMBOL

CONDUIT STUBOUT

NO SCALE ED000016 11 OCT 85



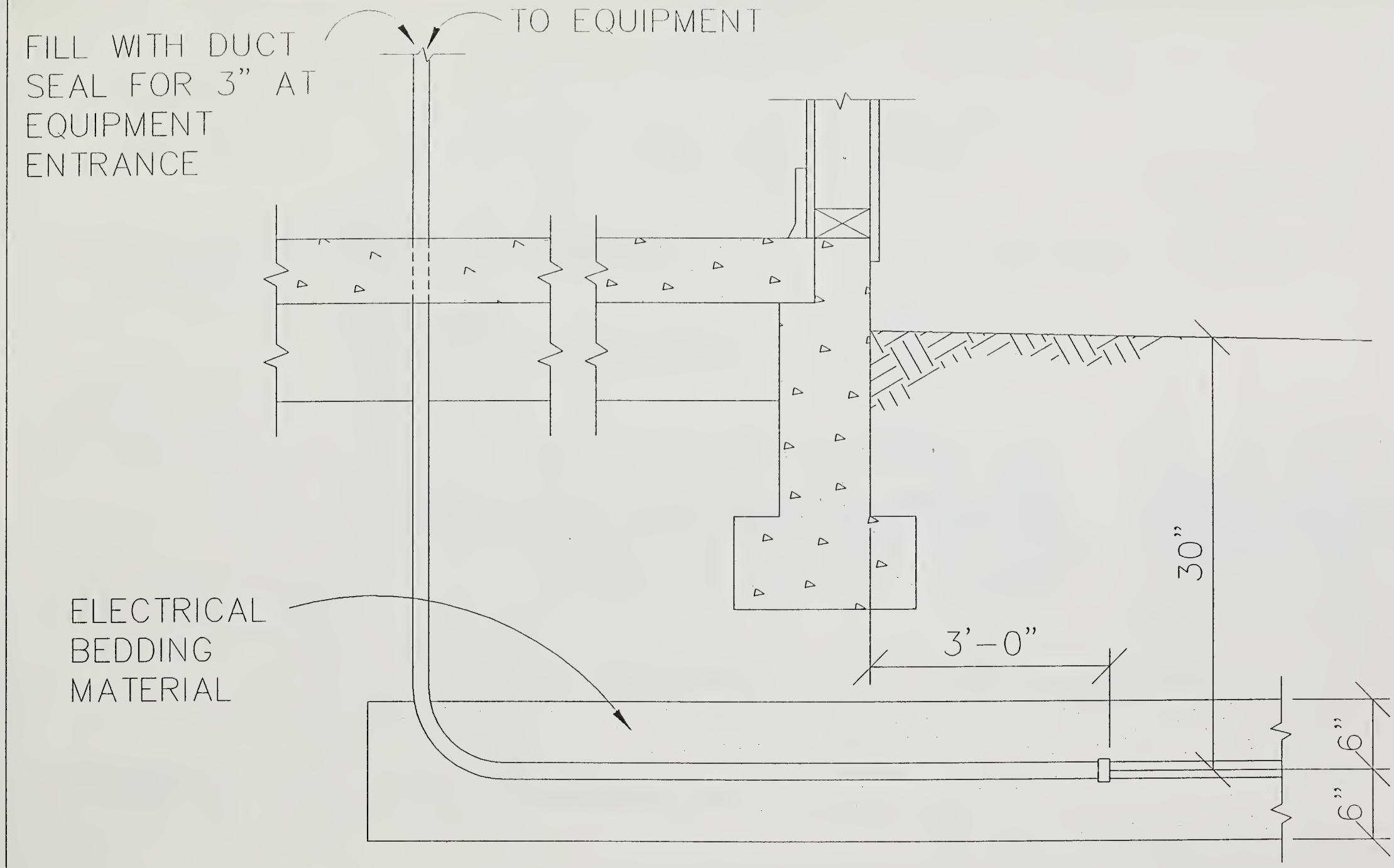
DRAWING SYMBOL

USE AT ALL CONDUIT STUBOUTS

CONDUIT STUBOUT

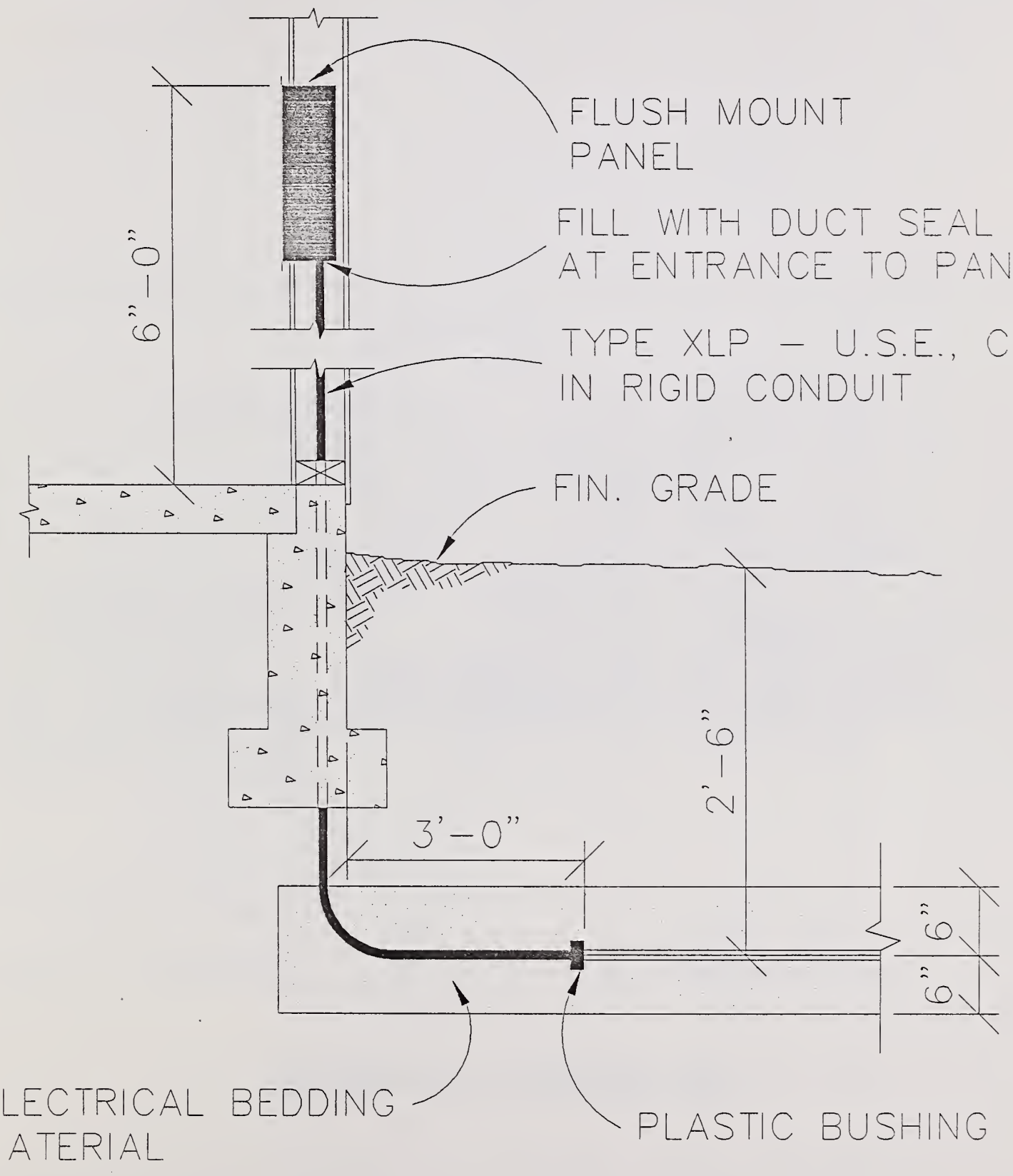
NO SCALE ED000017 11 OCT 85

ELECTRICAL SYMBOLS



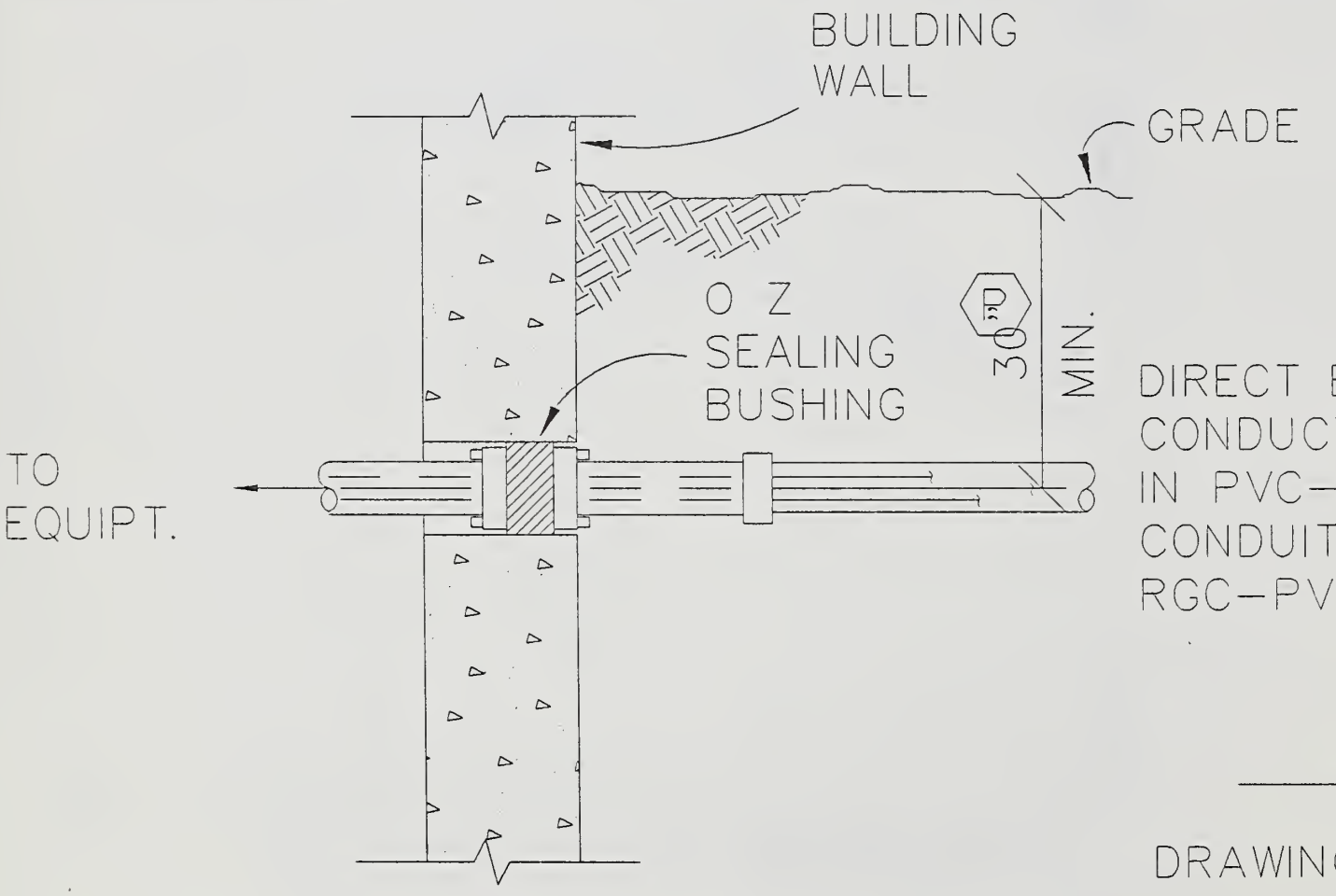
CONDUIT STUBOUT

NO SCALE ED000018 11 OCT 85



CONDUIT STUBOUT

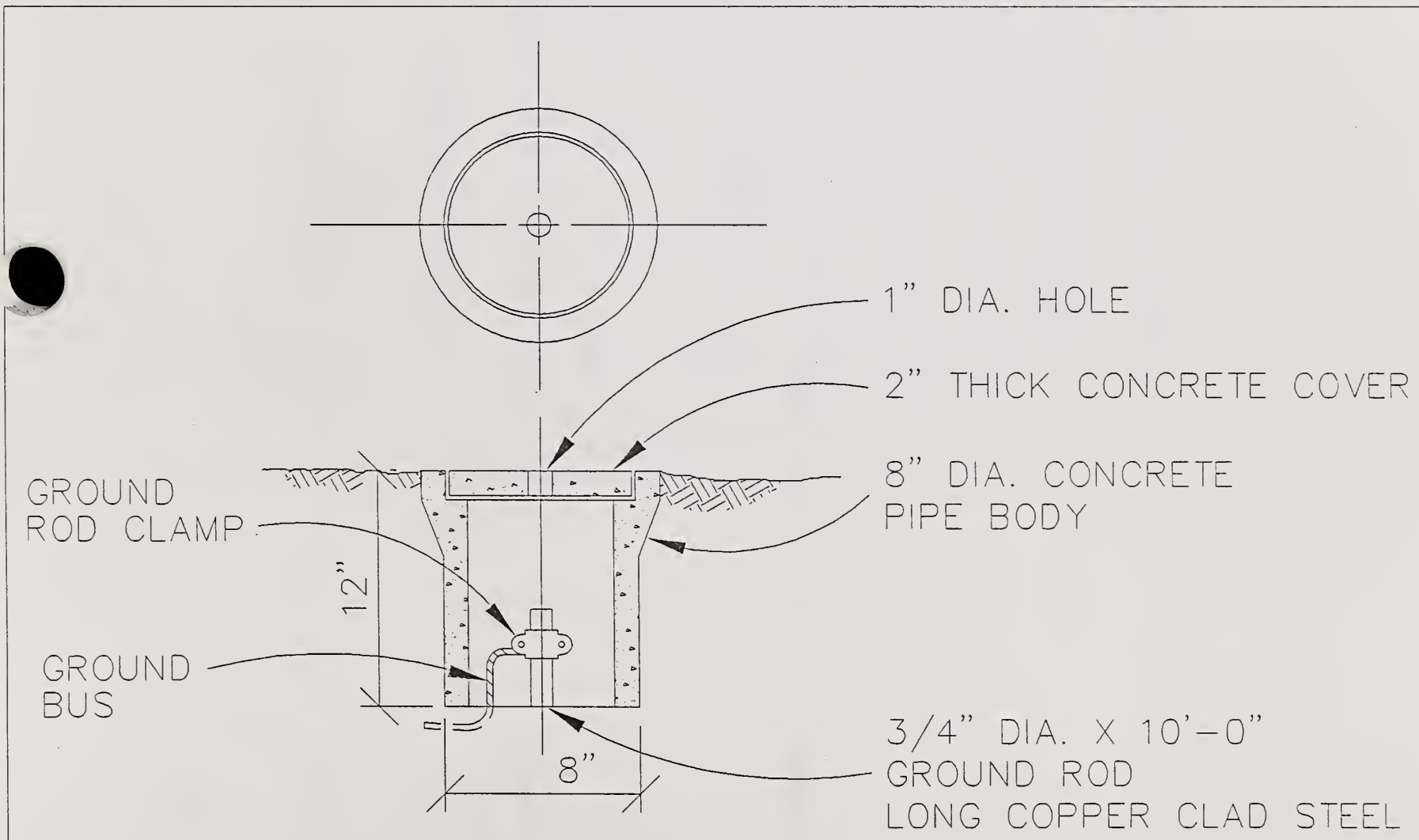
NO SCALE ED000019 11 OCT 85



USE AT ALL CONDUIT STUBOUTS

CONDUIT WALL & STUBOUT SEAL

NO SCALE
ED000020
11 OCT 85

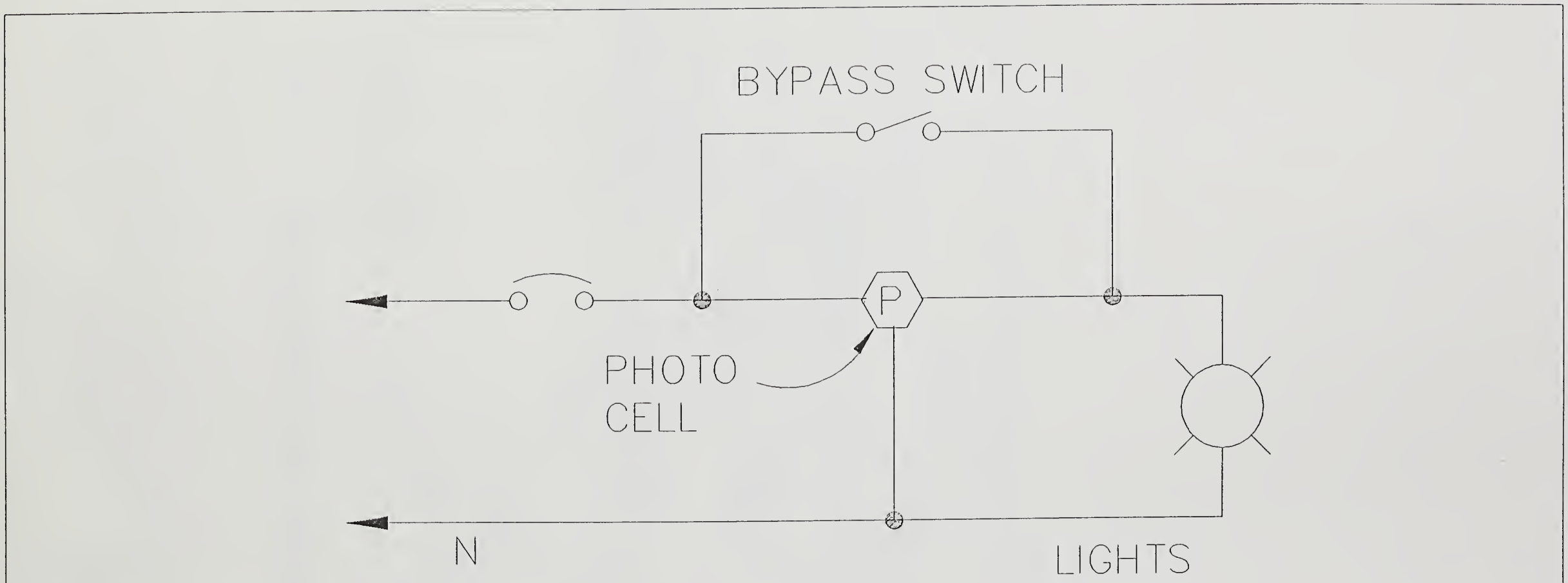


GROUND ROD INSTALLATION

GROUND ROD DETAIL

NO SCALE ED000021 11 OCT 85

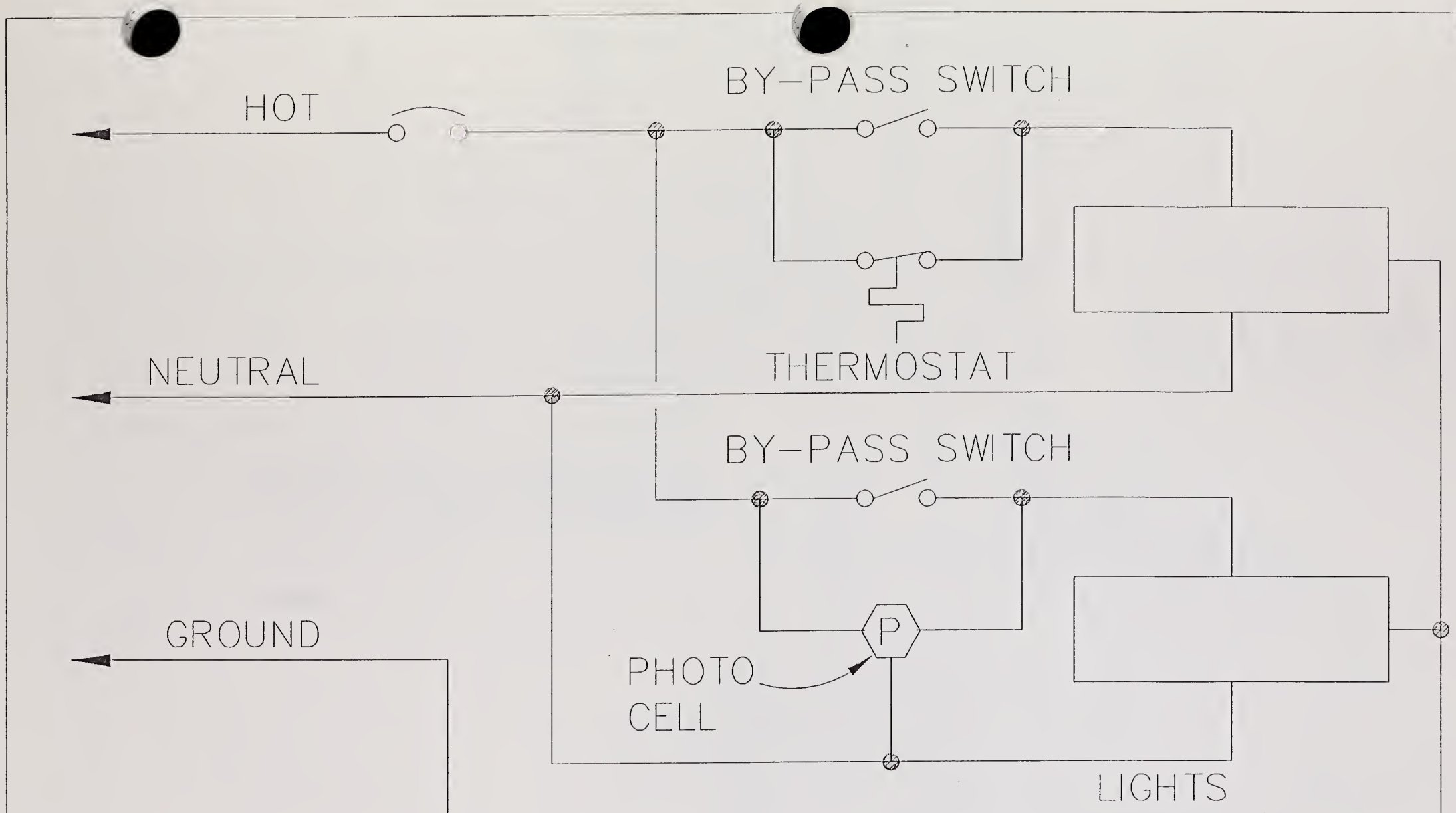
REV.8-6-87



PHOTOCELL CELL BYPASS

SWITCH

NO SCALE
ED000022
11 OCT 85

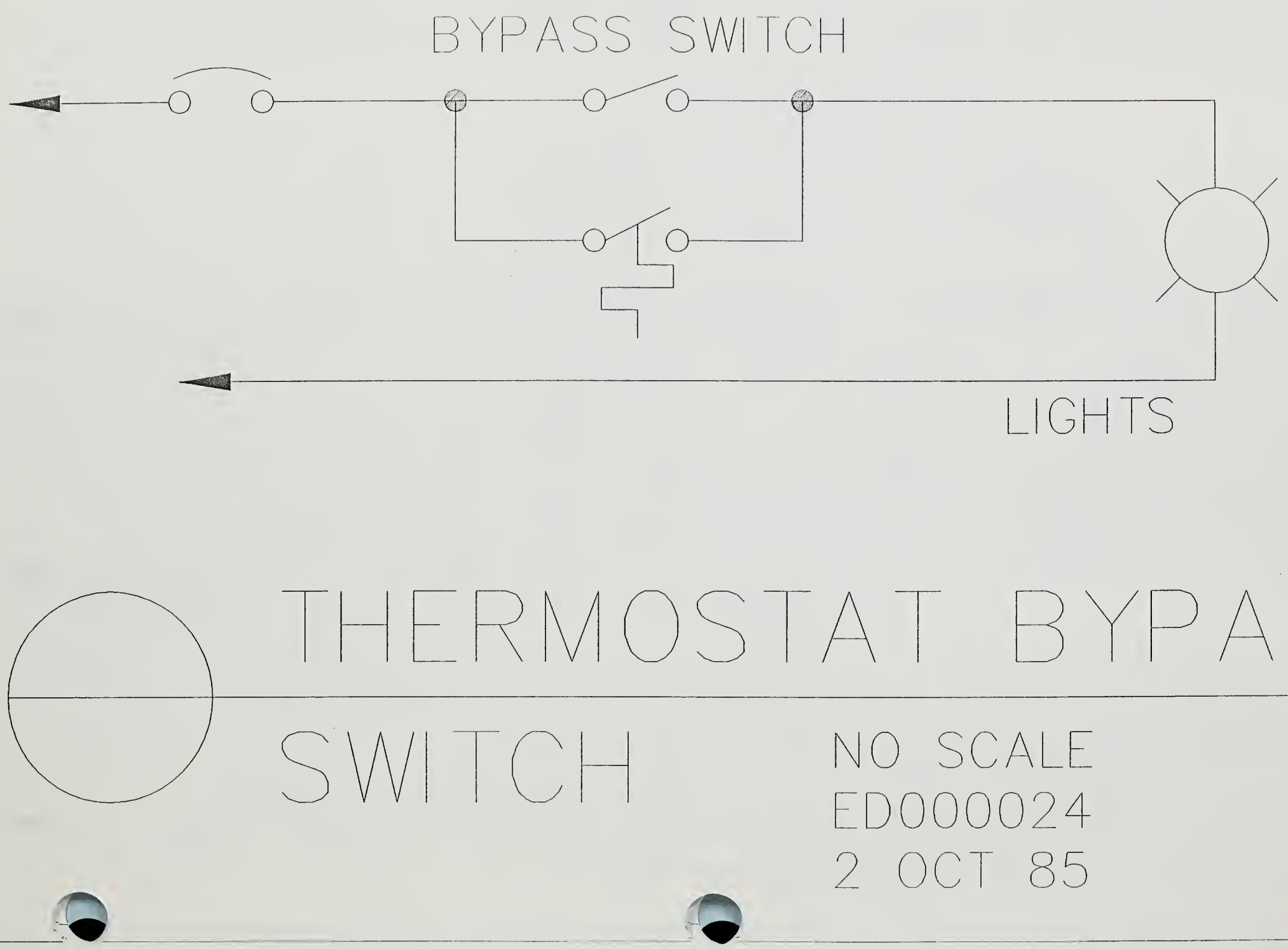


PHOTOCELL & THERMOSTAT

CONNECTION DETAILS

NO SCALE
ED000023
11 OCT 85

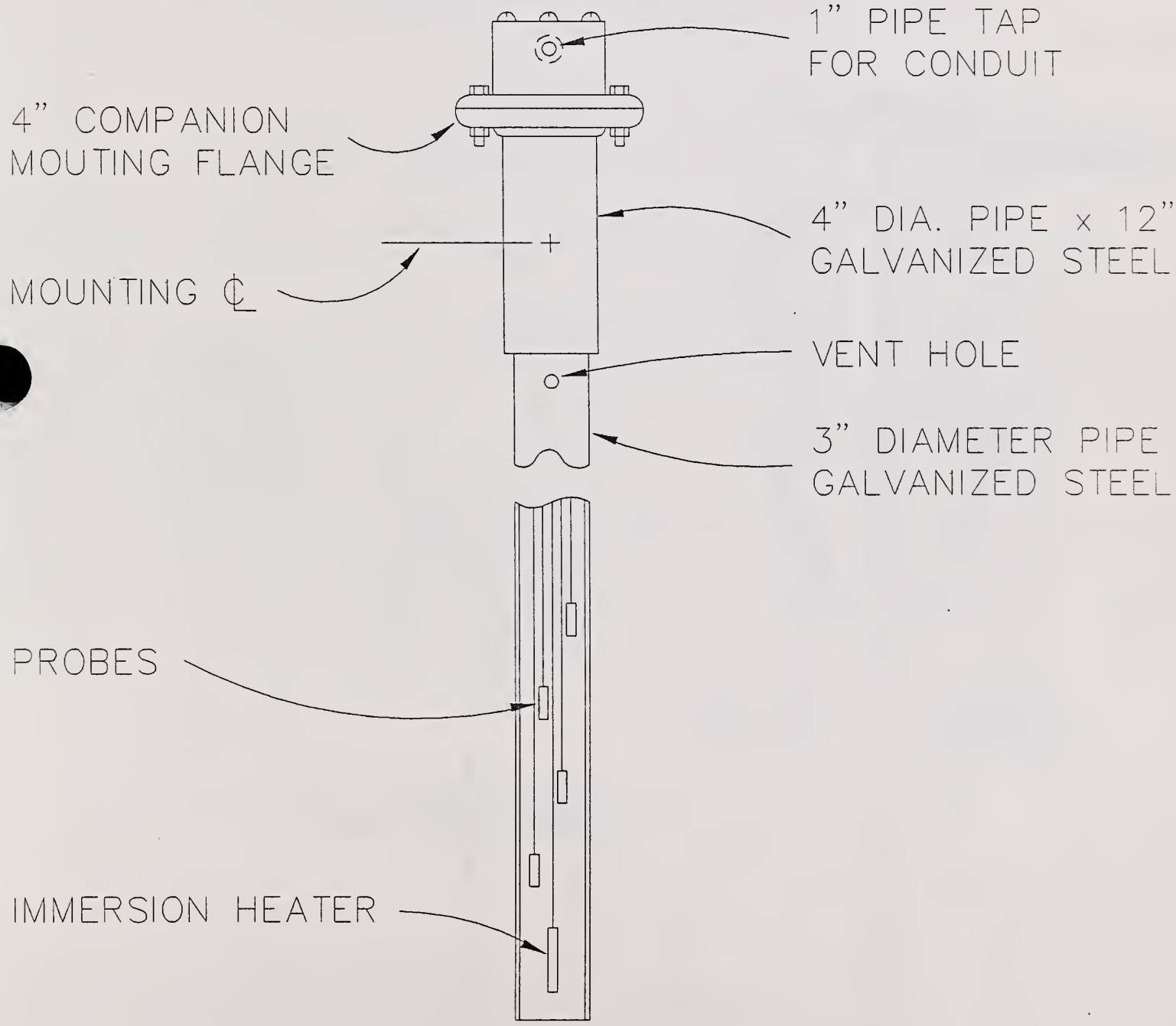
ELECTRICAL SYMBOLS



THERMOSTAT BYPASS

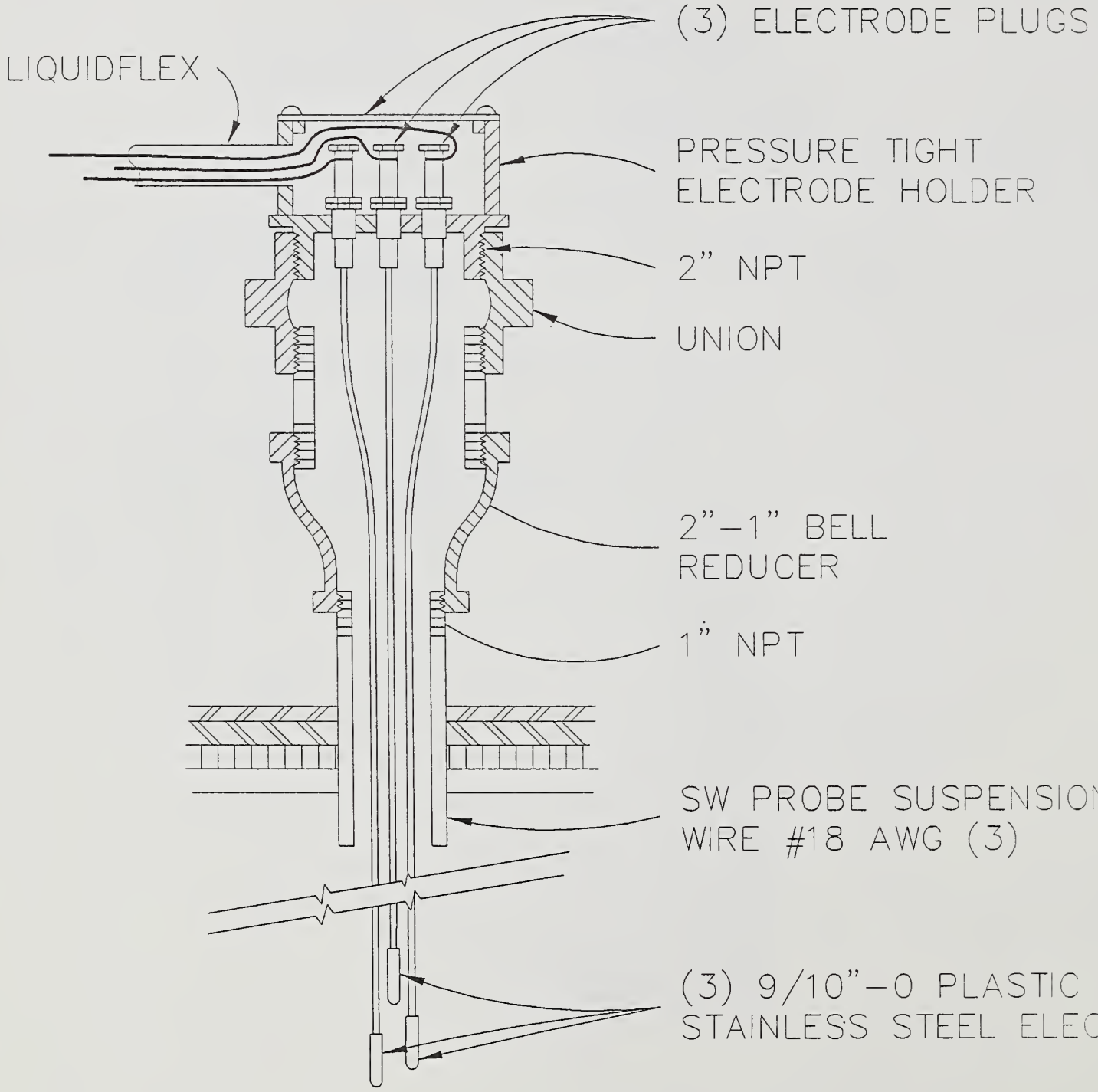
SWITCH

NO SCALE
ED000024
2 OCT 85



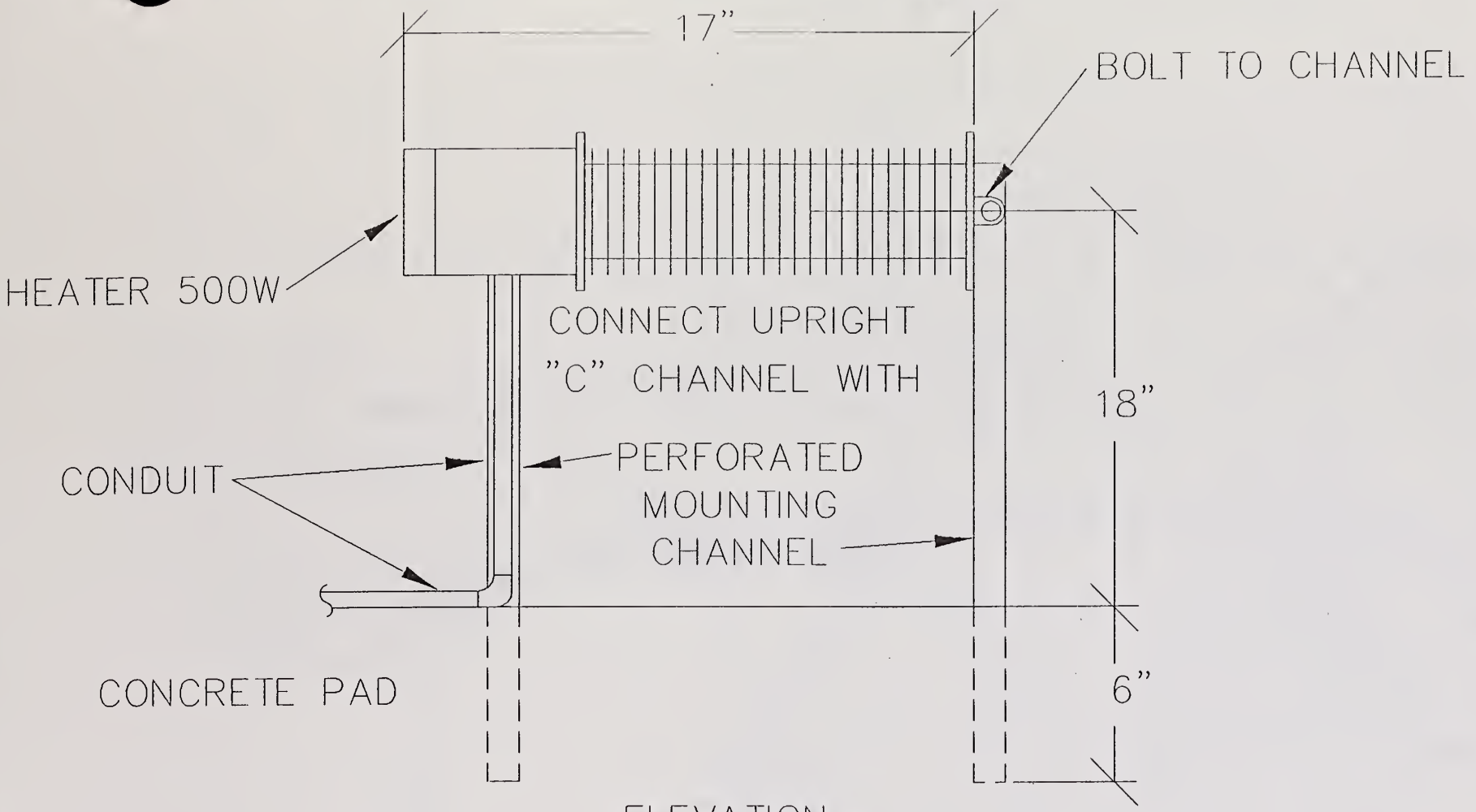
PROBE DETAIL

NO SCALE ED000025 6 OCT 85

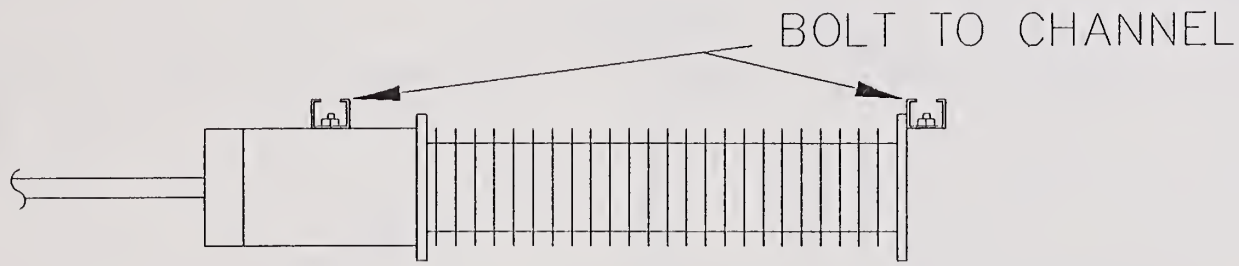


PROBE HOLDER

NO SCALE ED000026 6 OCT 85



ELEVATION

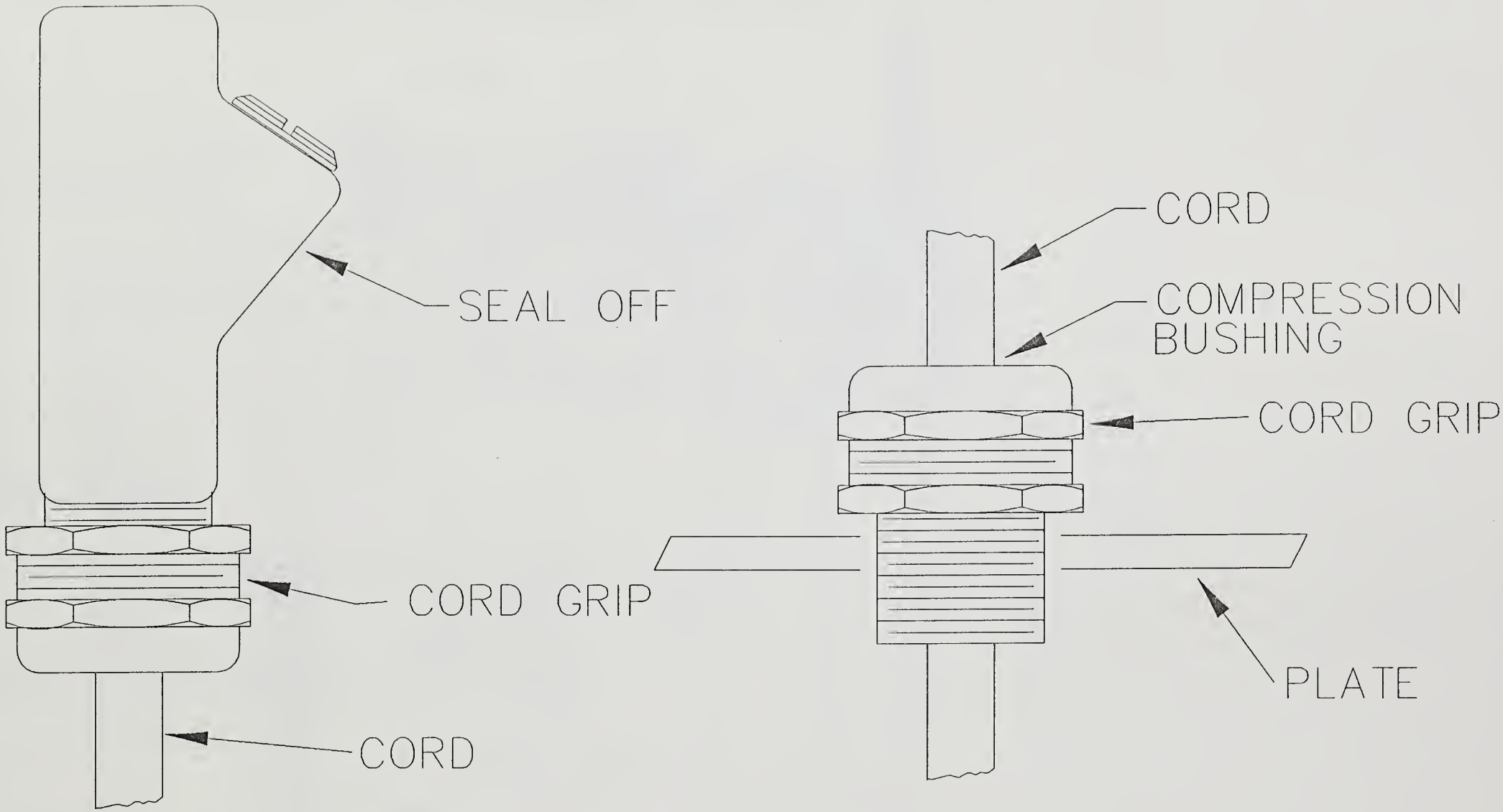


PLAN

HEATER MOUNTING DETAIL

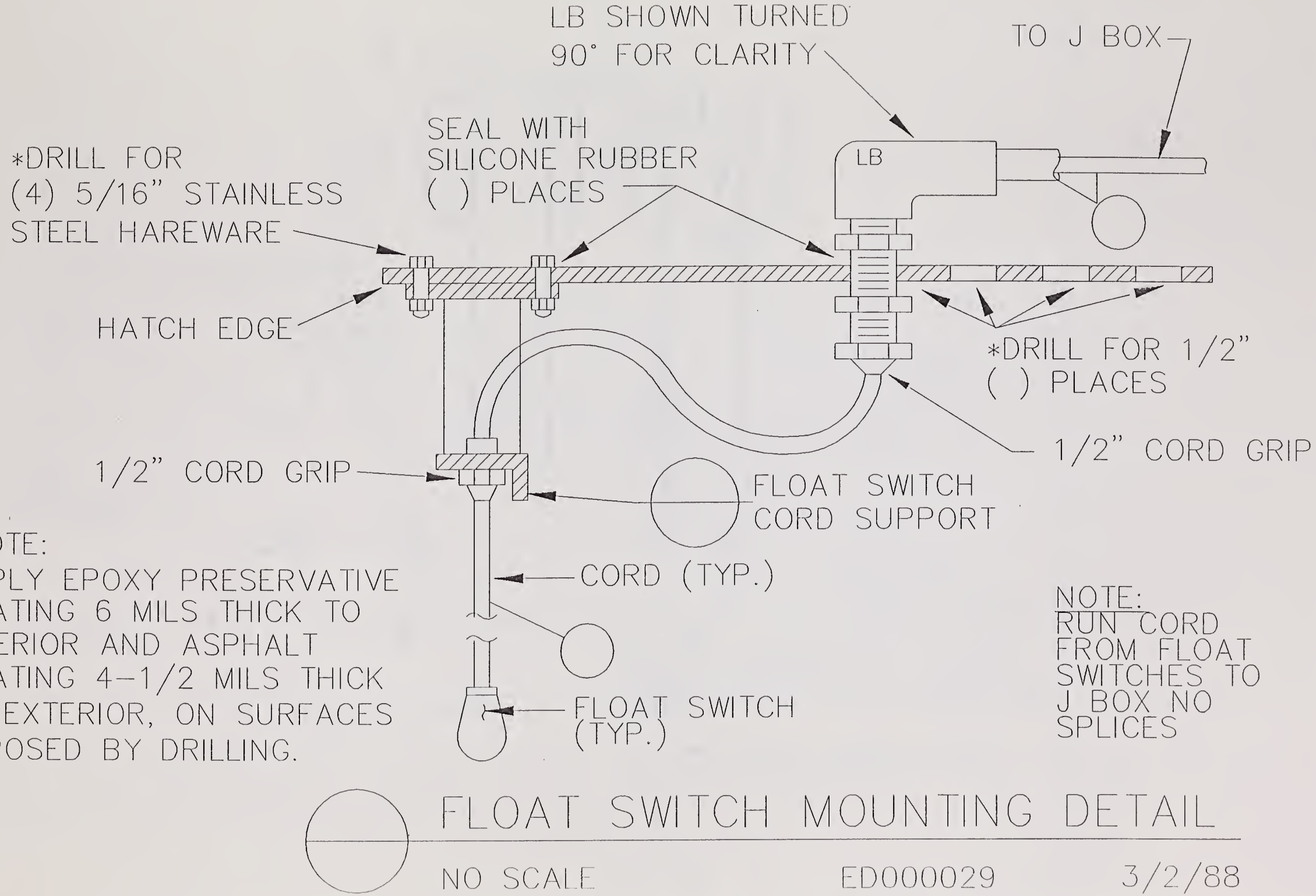
NO SCALE ED000027 3/2/88

ELECTRICAL SYMBOLS



COMPRESSION CABLE CORD GRIP & SEALOFF DETAIL

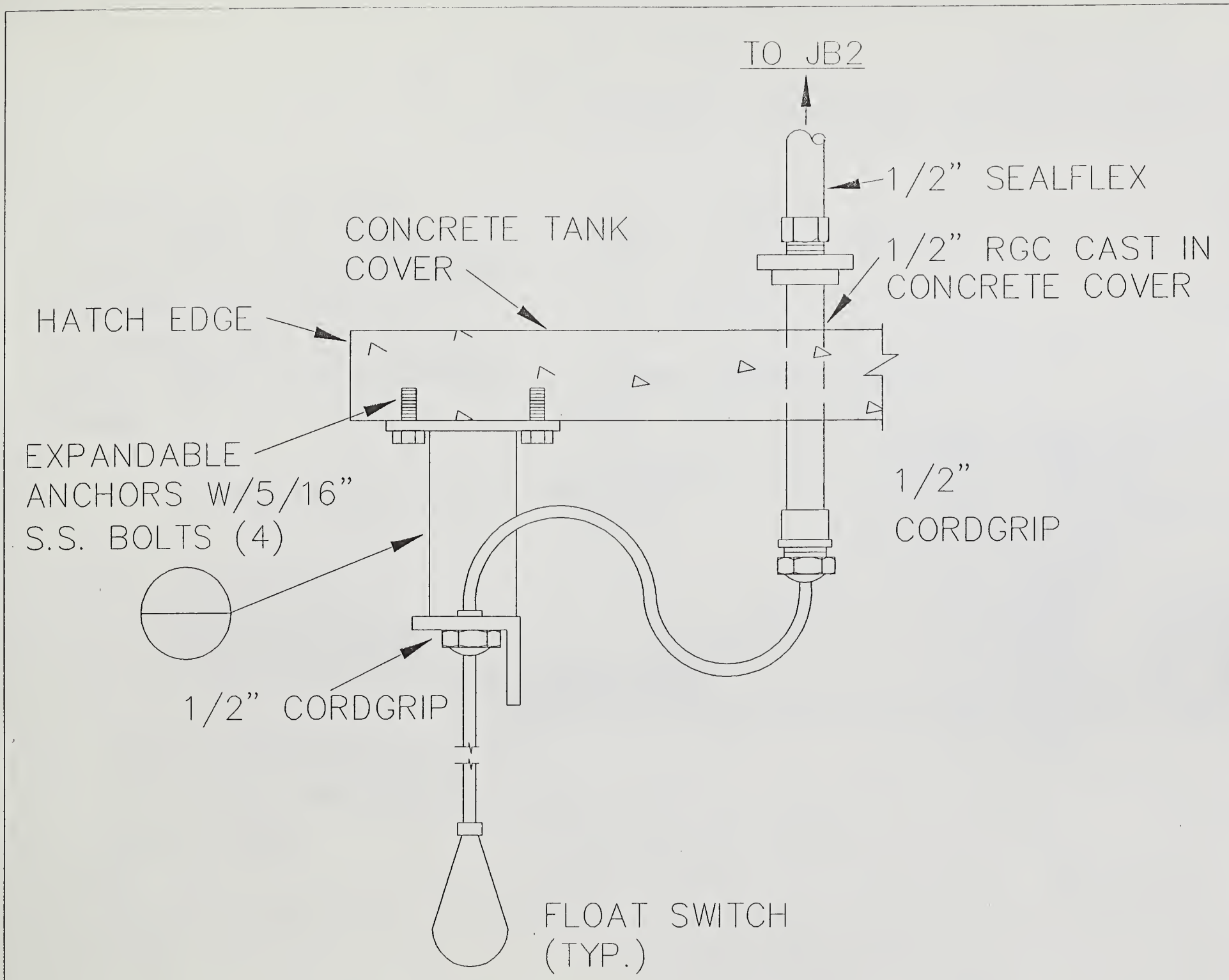
NO SCALE ED000028 3/2/88



FLOAT SWITCH MOUNTING DETAIL

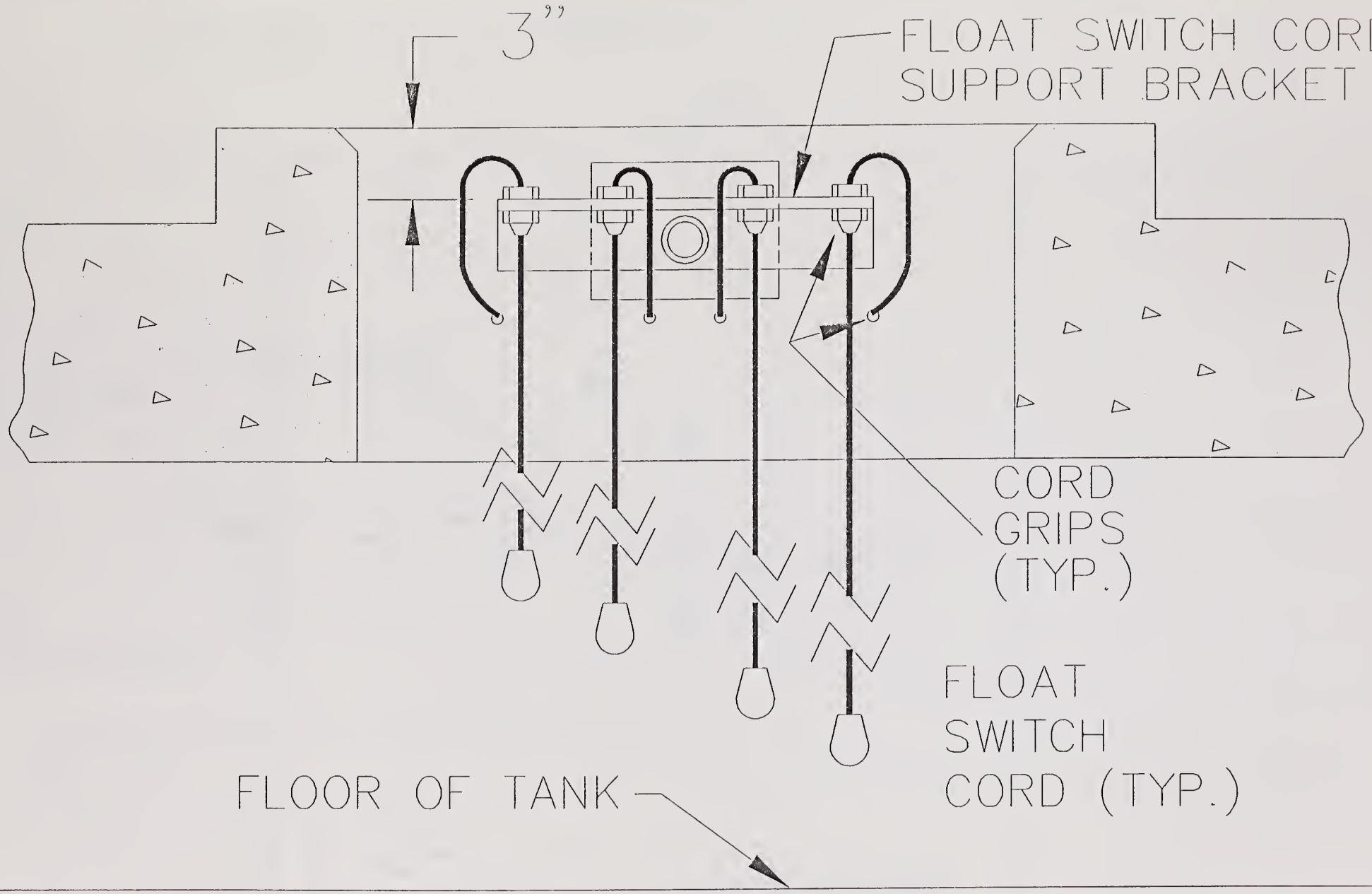
NO SCALE ED000029 3/2/88

ELECTRICAL SYMBOLS



FLOAT SWITCH MOUNTING DETAIL

NO SCALE FP000030 3/2/88

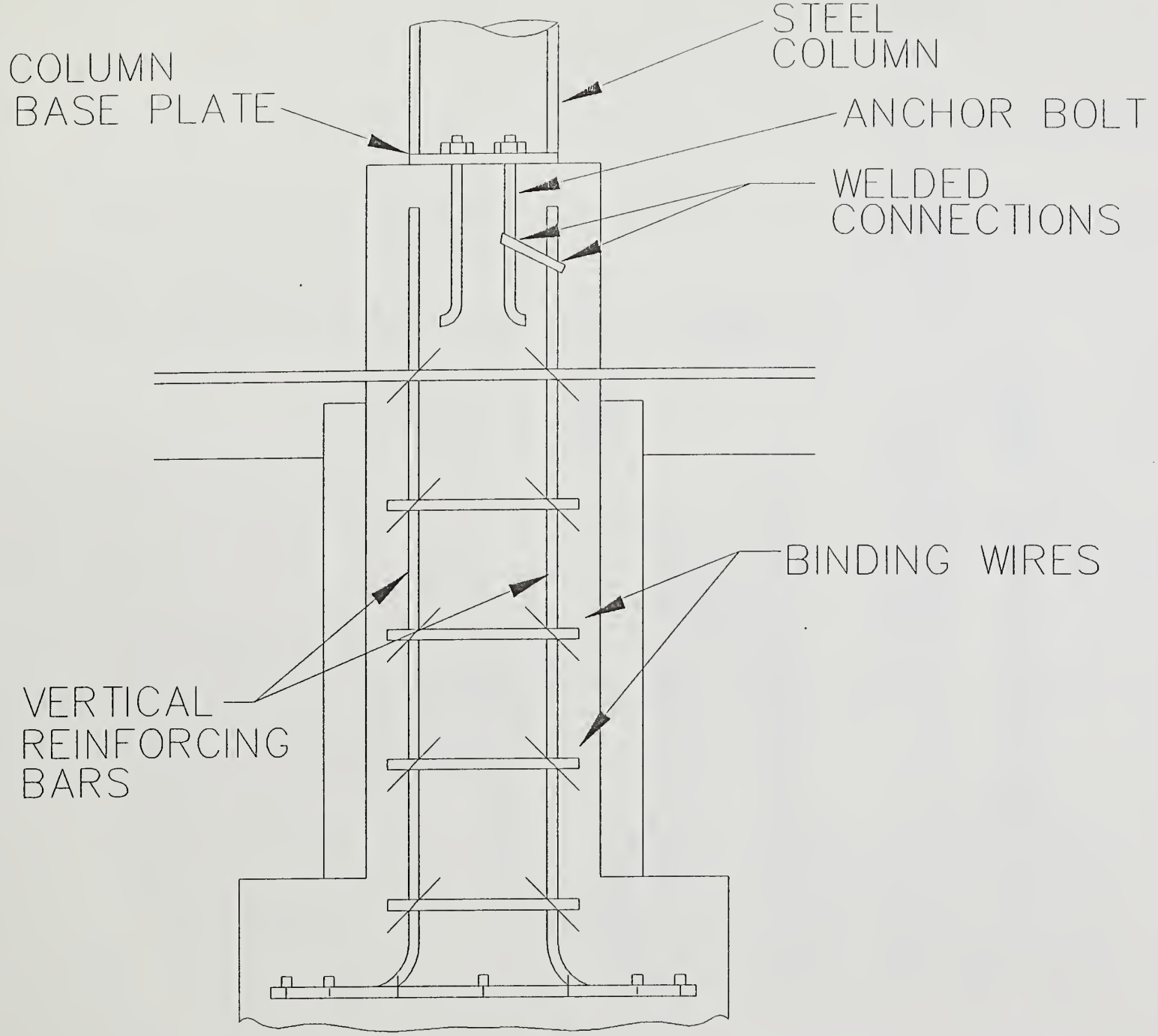


FLOAT SWITCH MOUNTING DETAIL

NO SCALE

FEB. 22, 1988 ED000031

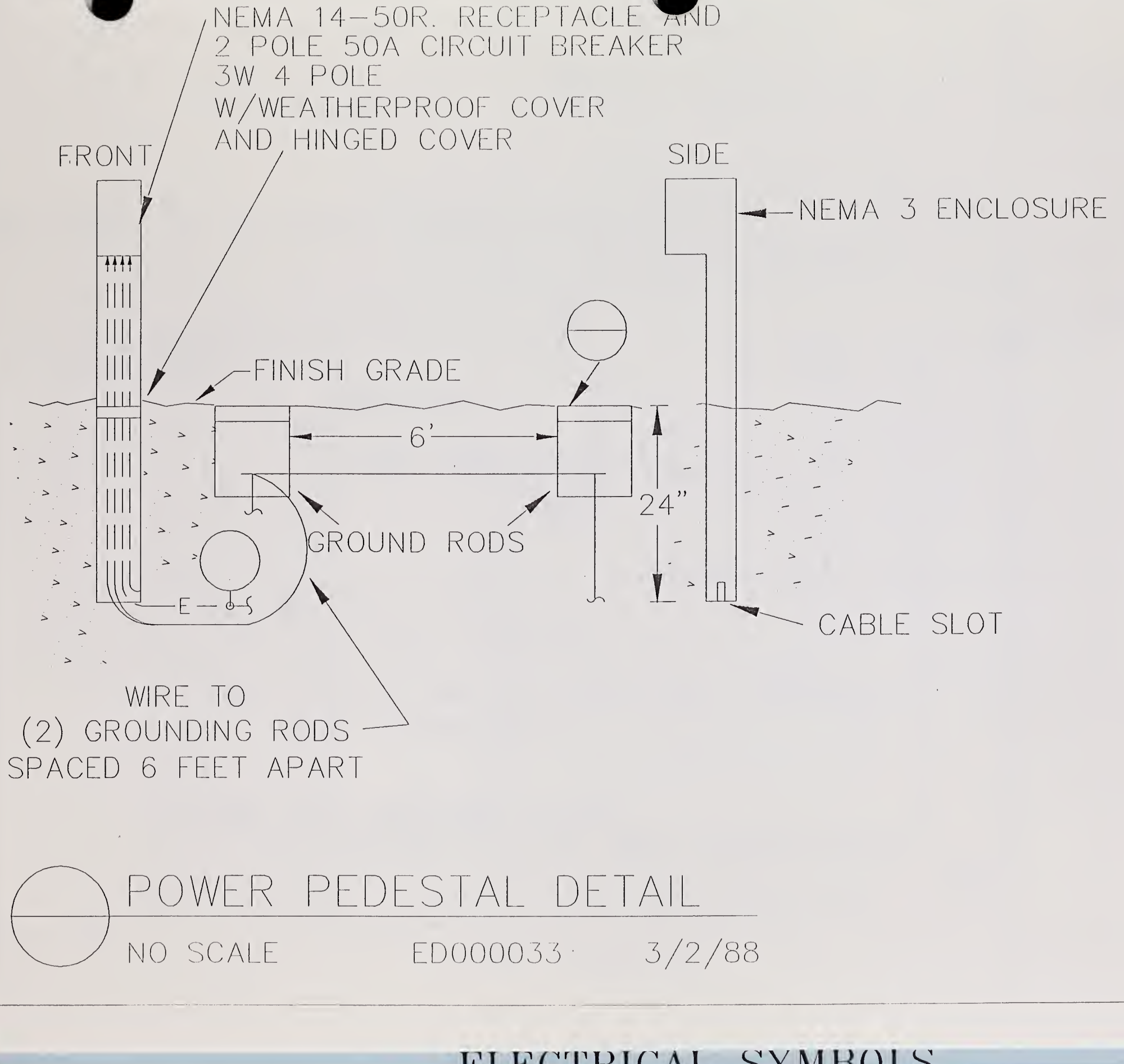
ELECTRICAL SYMBOLS



FOOTING GROUNDING

NO SCALE

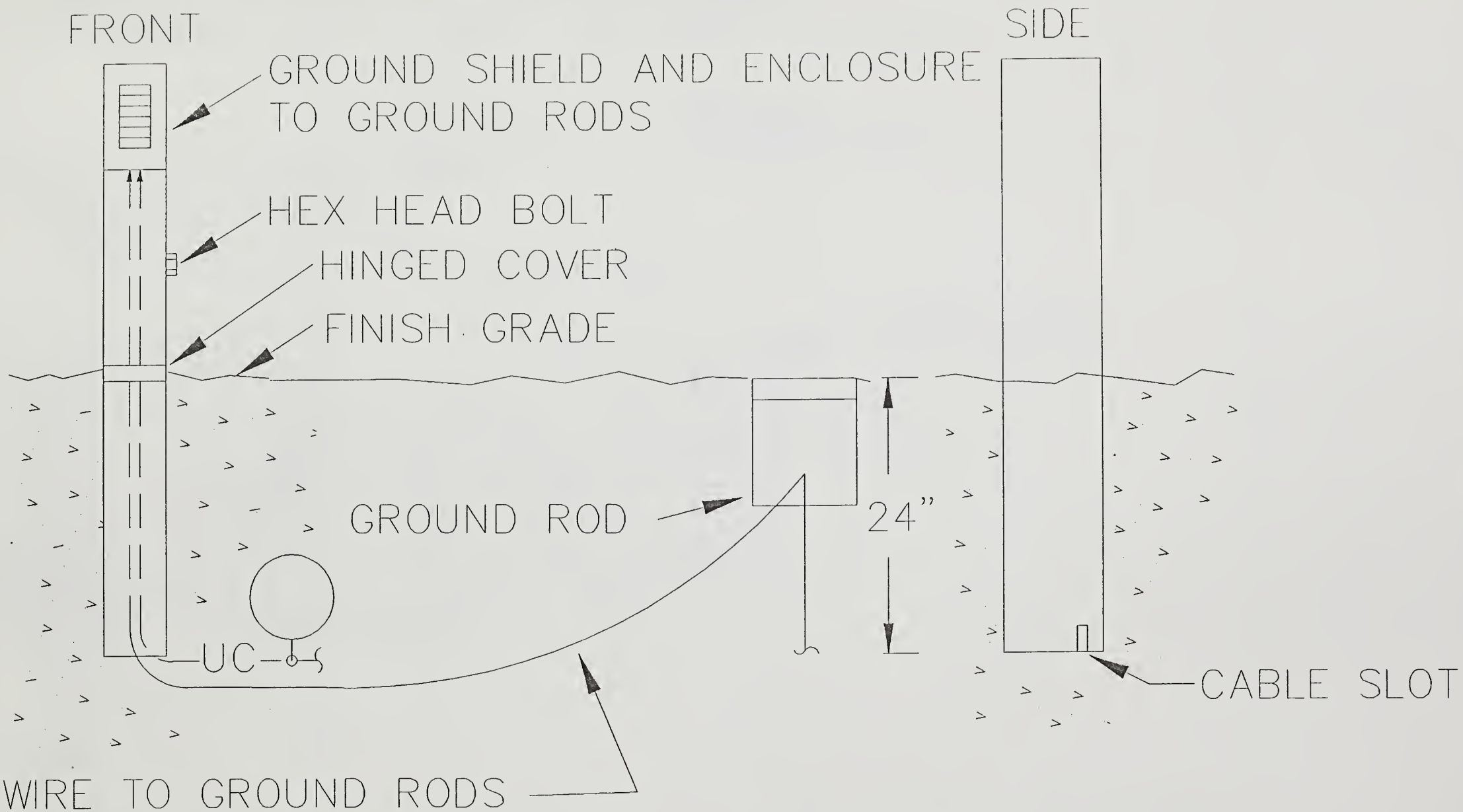
ED000032
3/2/88



POWER PEDESTAL DETAIL

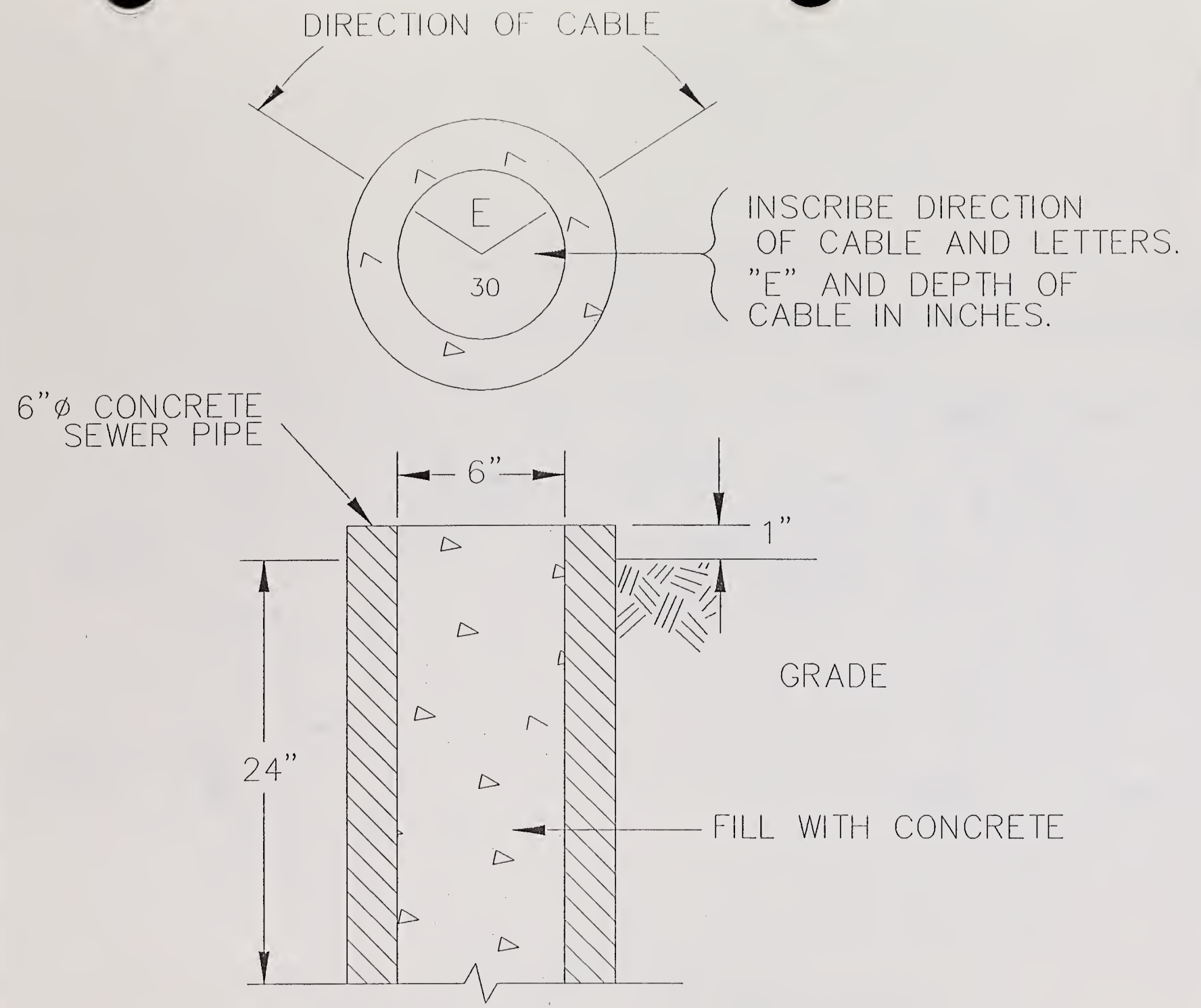
NO SCALE ED000033 3/2/88

ELECTRICAL SYMBOLS



CONTROL CABLE PEDESTAL DETAIL

NO SCALE ED000034 3/2/88

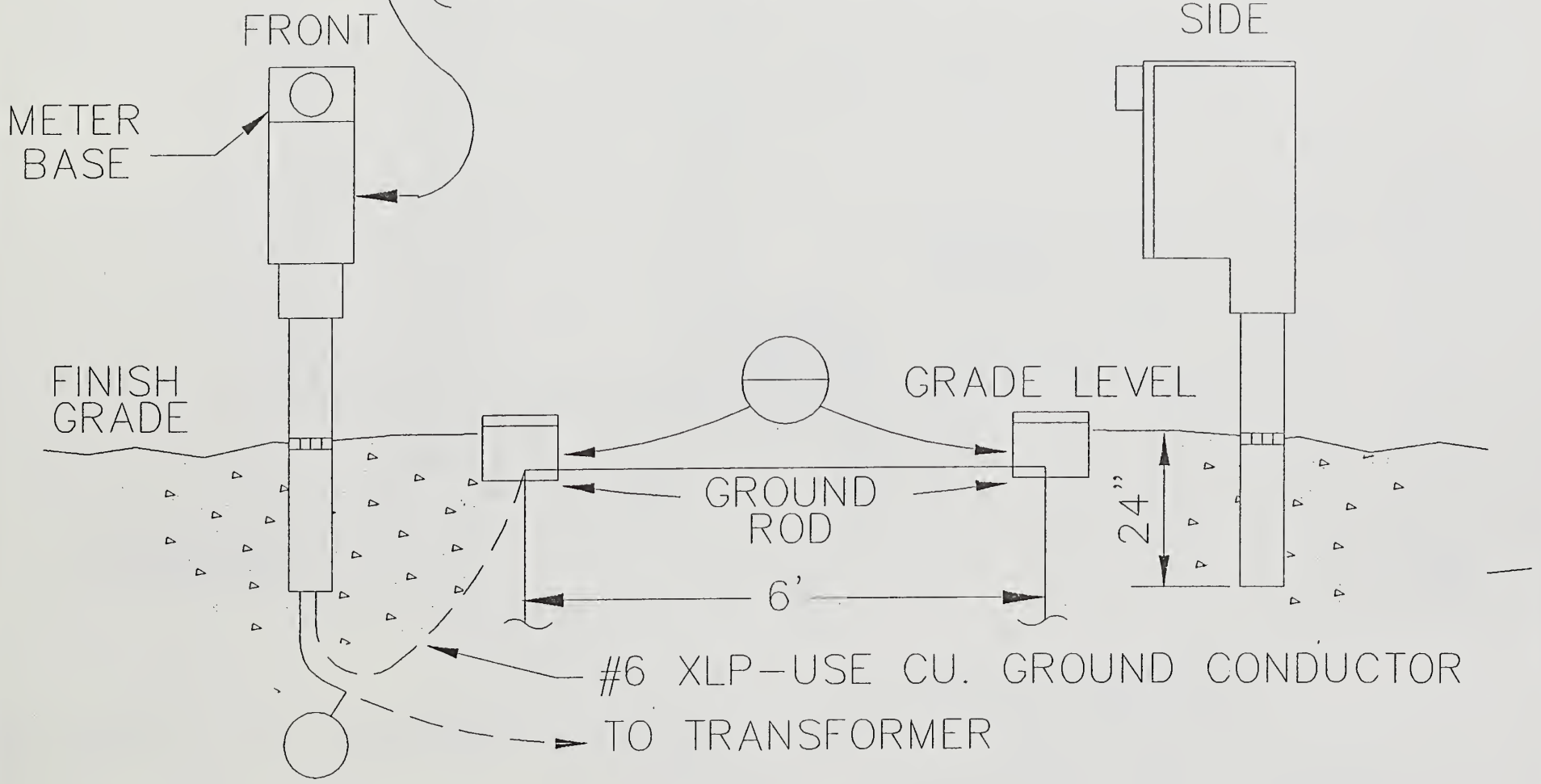


ELECTRICAL CABLE MARKER DETAIL

NO SCALE 3/2/88 ED000035

ELECTRICAL SYMBOLS

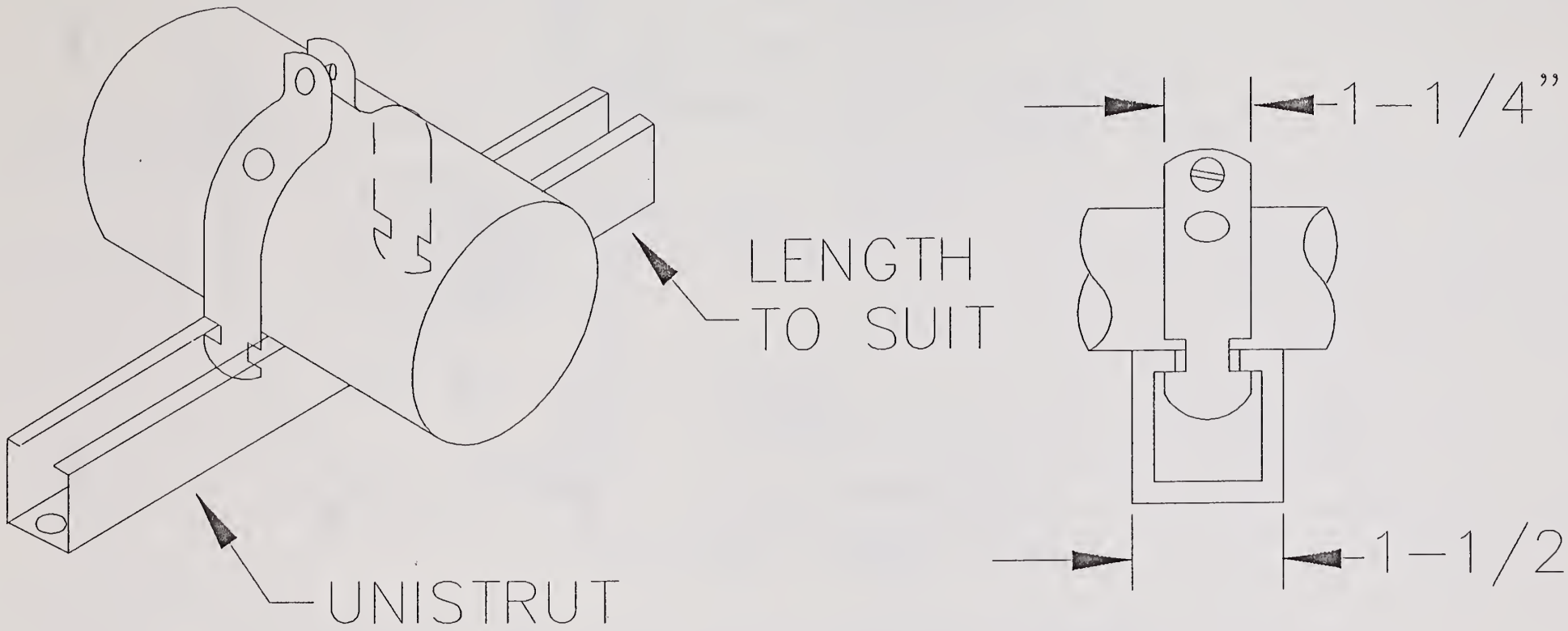
(1) 20A, 125V DUPLEX OUTLET
W/20A, 1 POLE GFI BREAKER
(1) 30A, 125V OUTLET ANSI
C 73.13–1972 W/1 POLE
30A BREAKER
(1) 50A 1 POLE SUBFEED BREAKER



TRAILER POWER PEDESTAL

NO SCALE ED000036 3/2/88

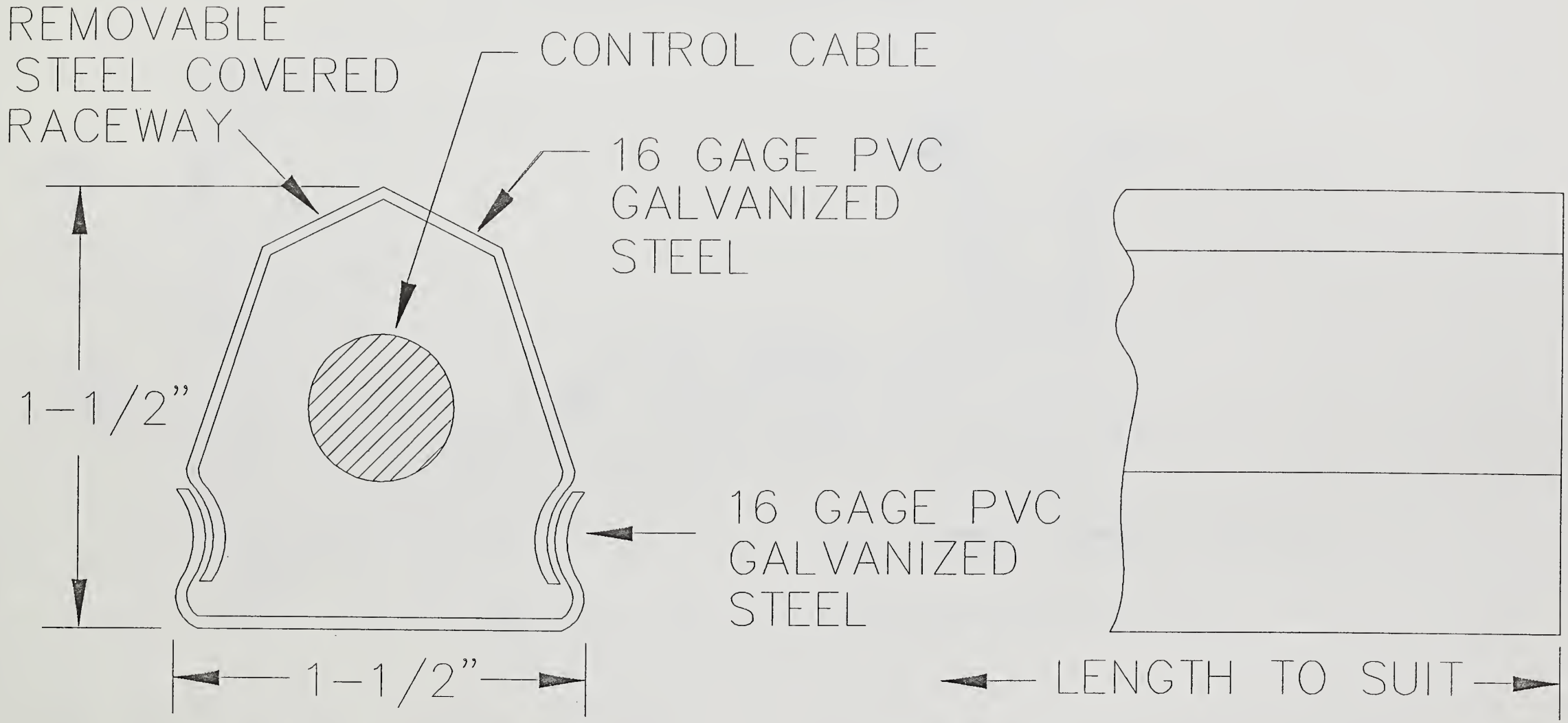
NOTE:
WELD UNISTRUT TO
WATER TANK AND WELD
OR BOLT TO TANK LEGS.



CONDUIT SUPPORT

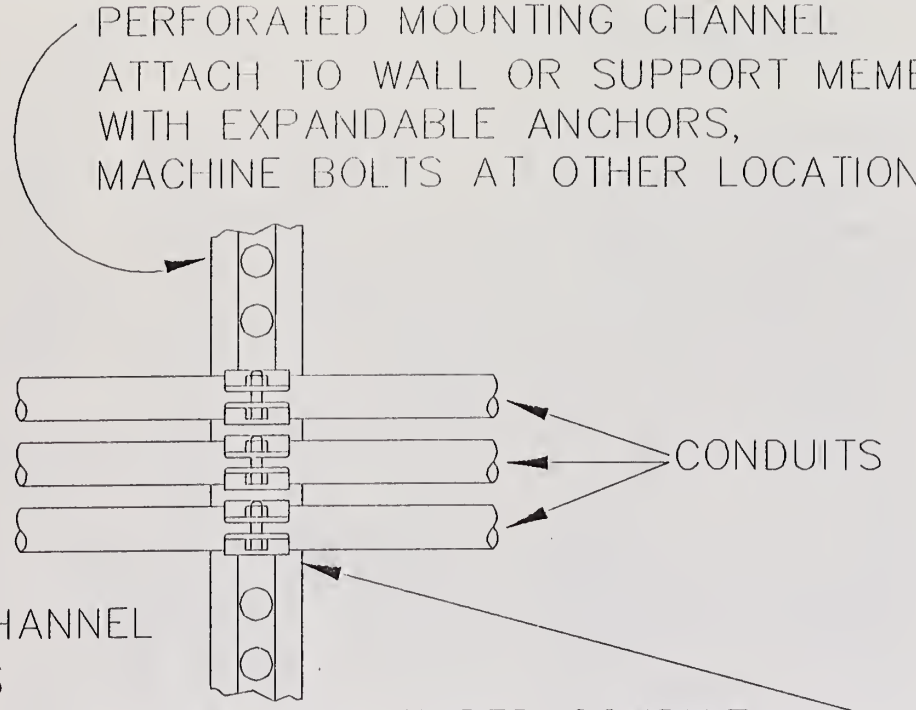
DETAIL NO SCALE 3/2/88 ED000037

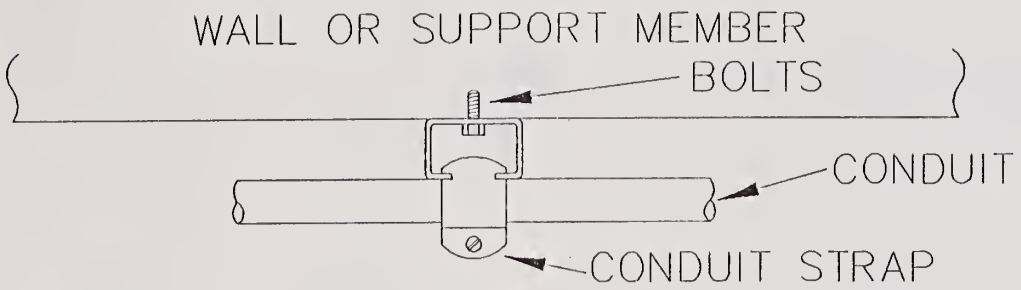
ELECTRICAL SYMBOLS



SNAP TOGETHER RACEWAY

NO SCALE 3/2/88 ED000038



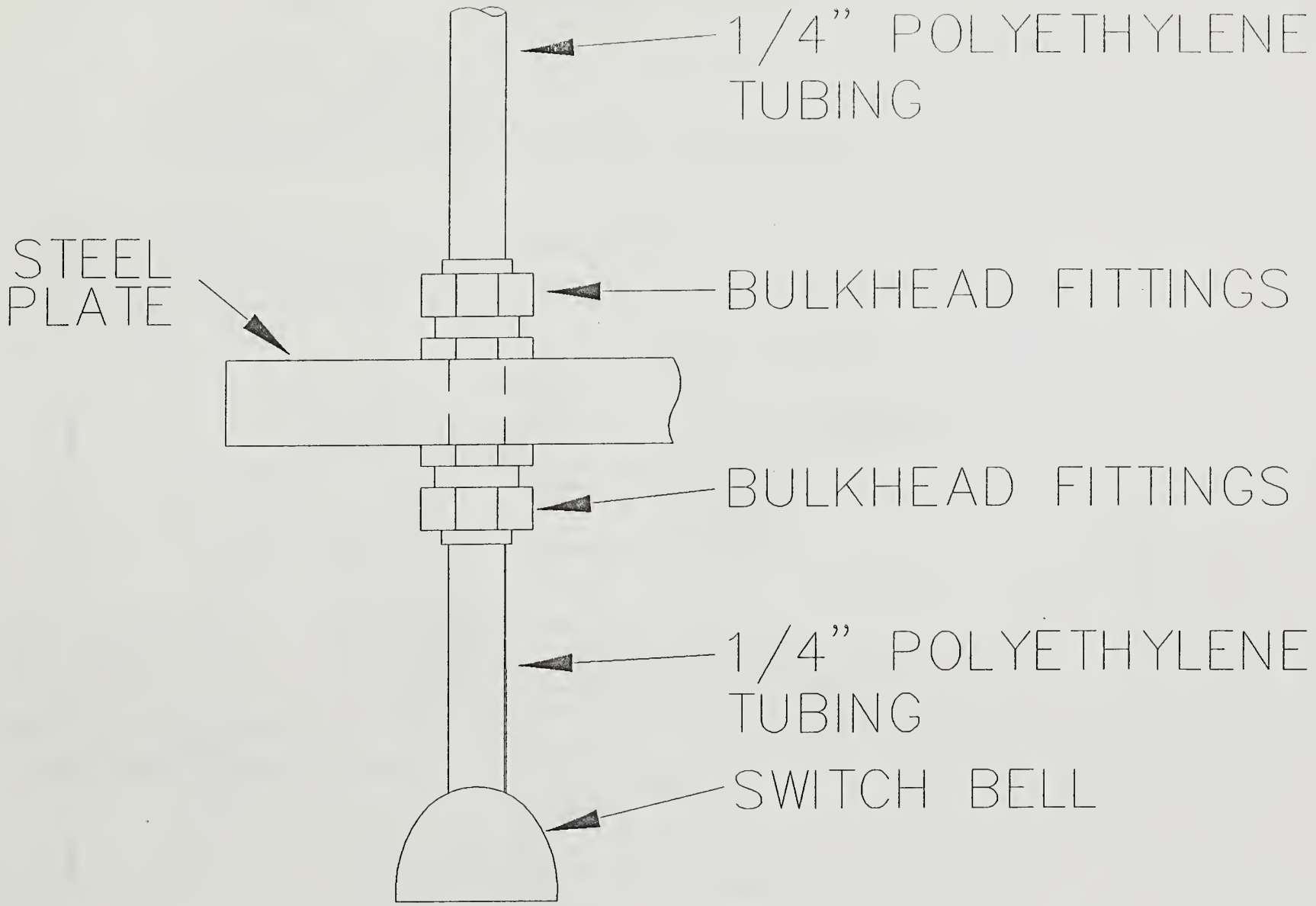


MOUNT CONDUITS AT HEIGHT SPECIFIED OR SHOWN IN PLANS
USE FOR SURFACE MOUNT CONDUITS.

CONDUIT MOUNTING DETAIL

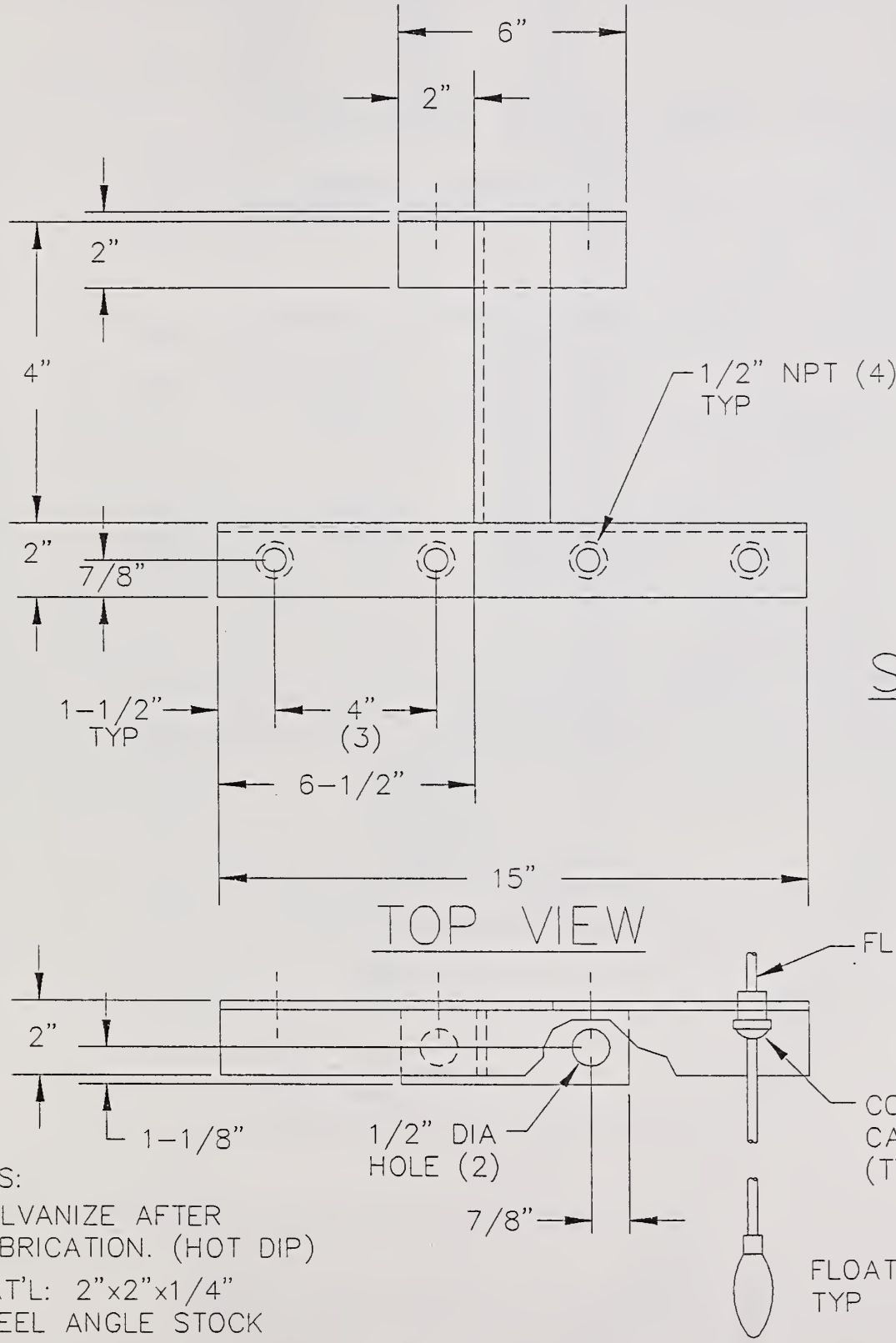
USE IN AREAS WHERE TWO
OR MORE CONDUITS RUN PARALLEL

NO SCALE ED000039
3/2/88



(TYP.) BELL SWITCH MOUNTING DETAIL

NO SCALE ED000040 3/2/88



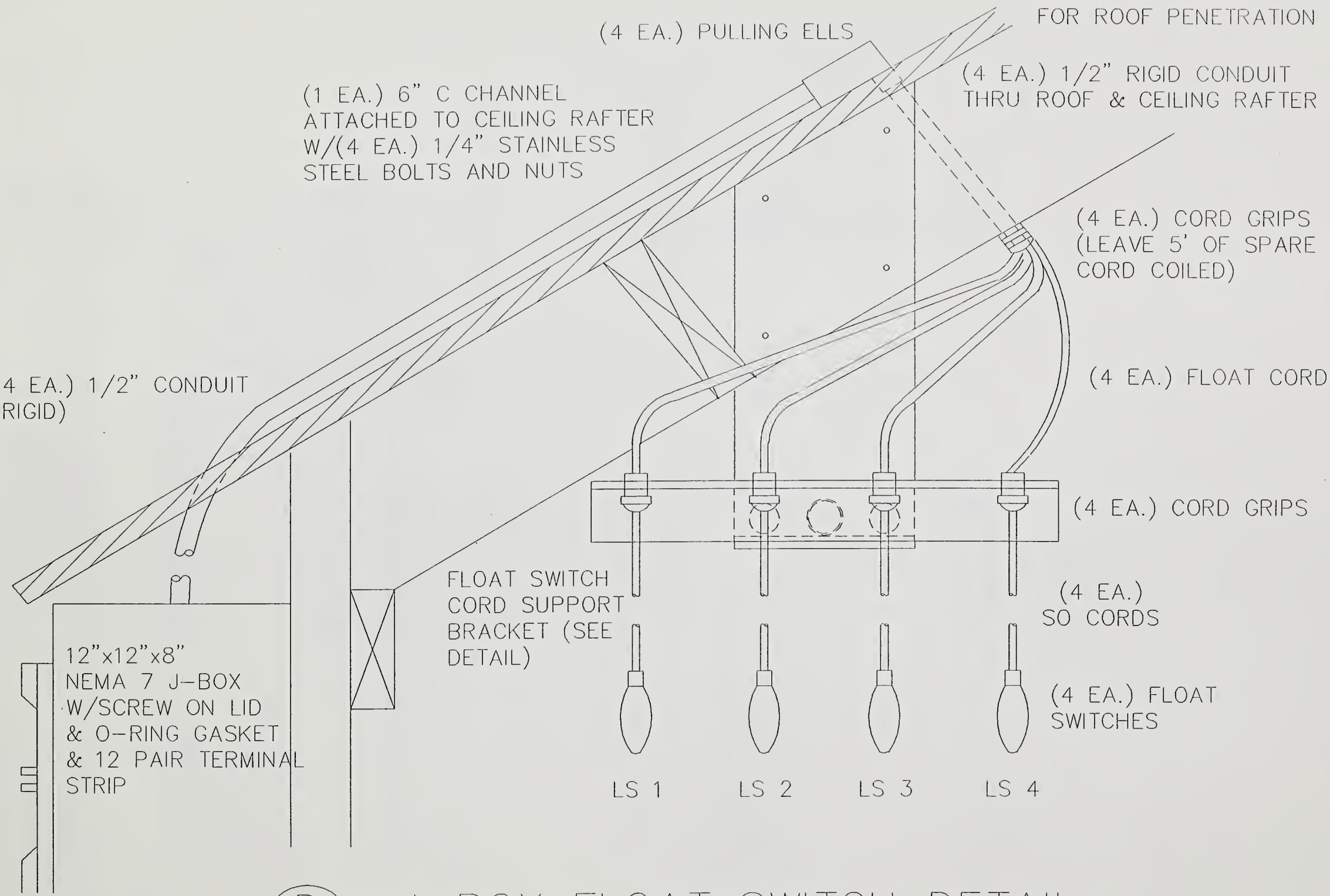
NOTES:

1. GALVANIZE AFTER FABRICATION. (HOT DIP)
2. MAT'L: 2"x2"x1/4" STEEL ANGLE STOCK
3. S.S. IS ACCEPTABLE IN LIEU OF GALVANIZED STEEL.

A FLOAT SWITCH CORD SUPPORT BRACKET

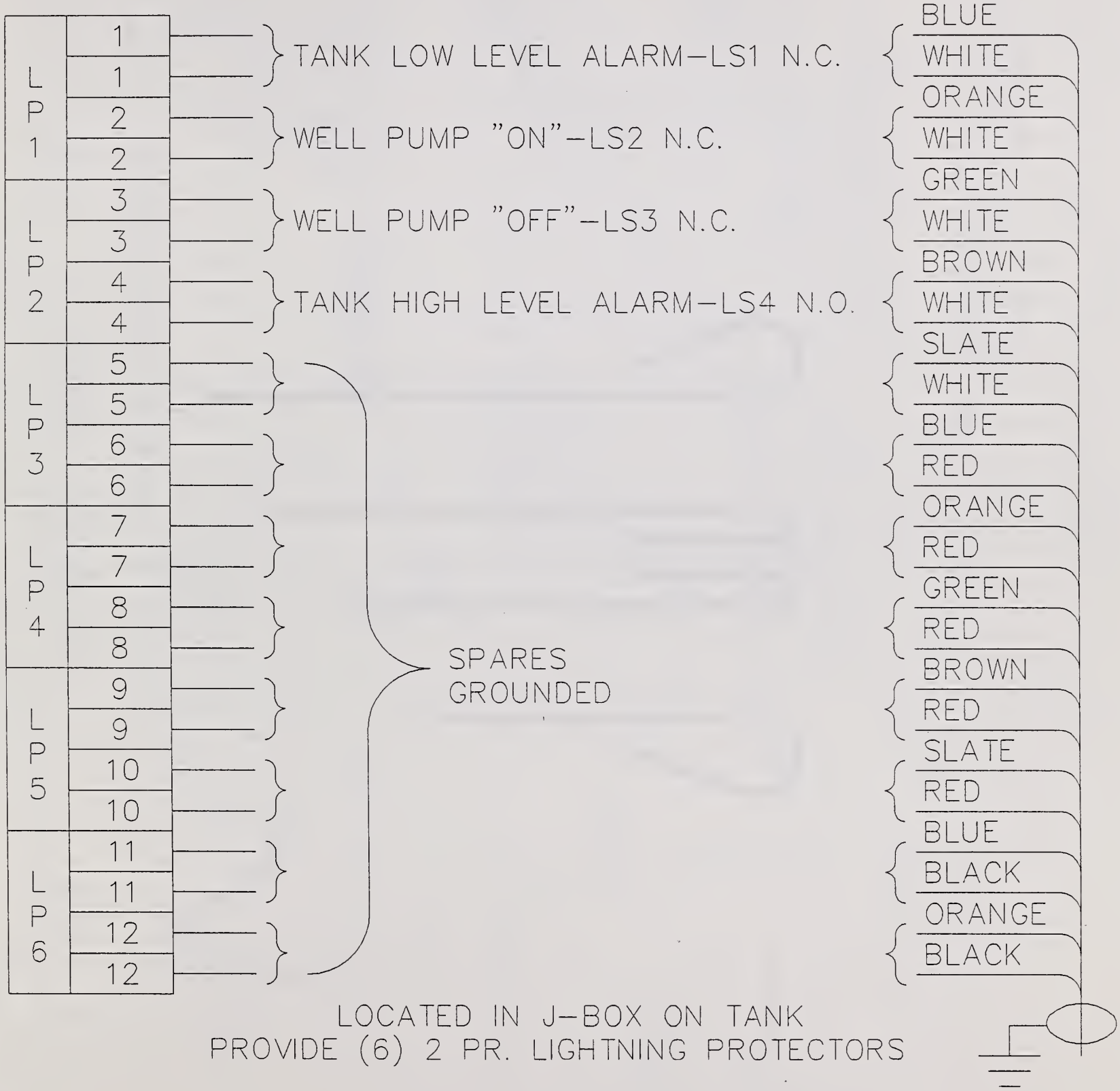
NO SCALE ED000042 FEB. 14, 1986

ELECTRICAL SYMBOLS



D J-BOX FLOAT SWITCH DETAIL

NO SCALE ED000043 FEB 14,1986



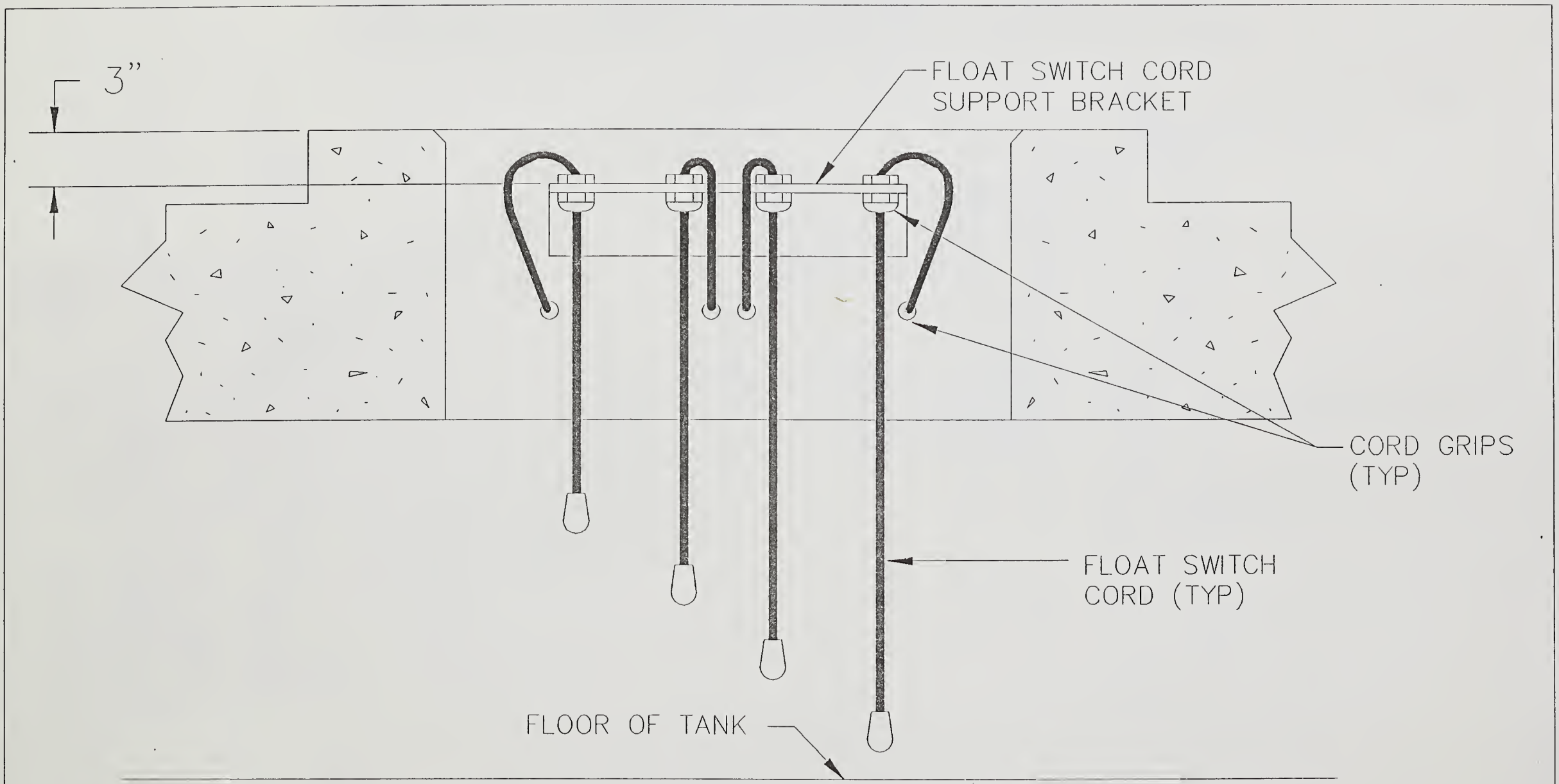
LOCATED IN J–BOX ON TANK
PROVIDE (6) 2 PR. LIGHTNING PROTECTORS

B

CONTROL CABLE LIGHTNING PROTECTOR CONNECTIONS

ED000044 FEB. 14,1986 NO SCALE

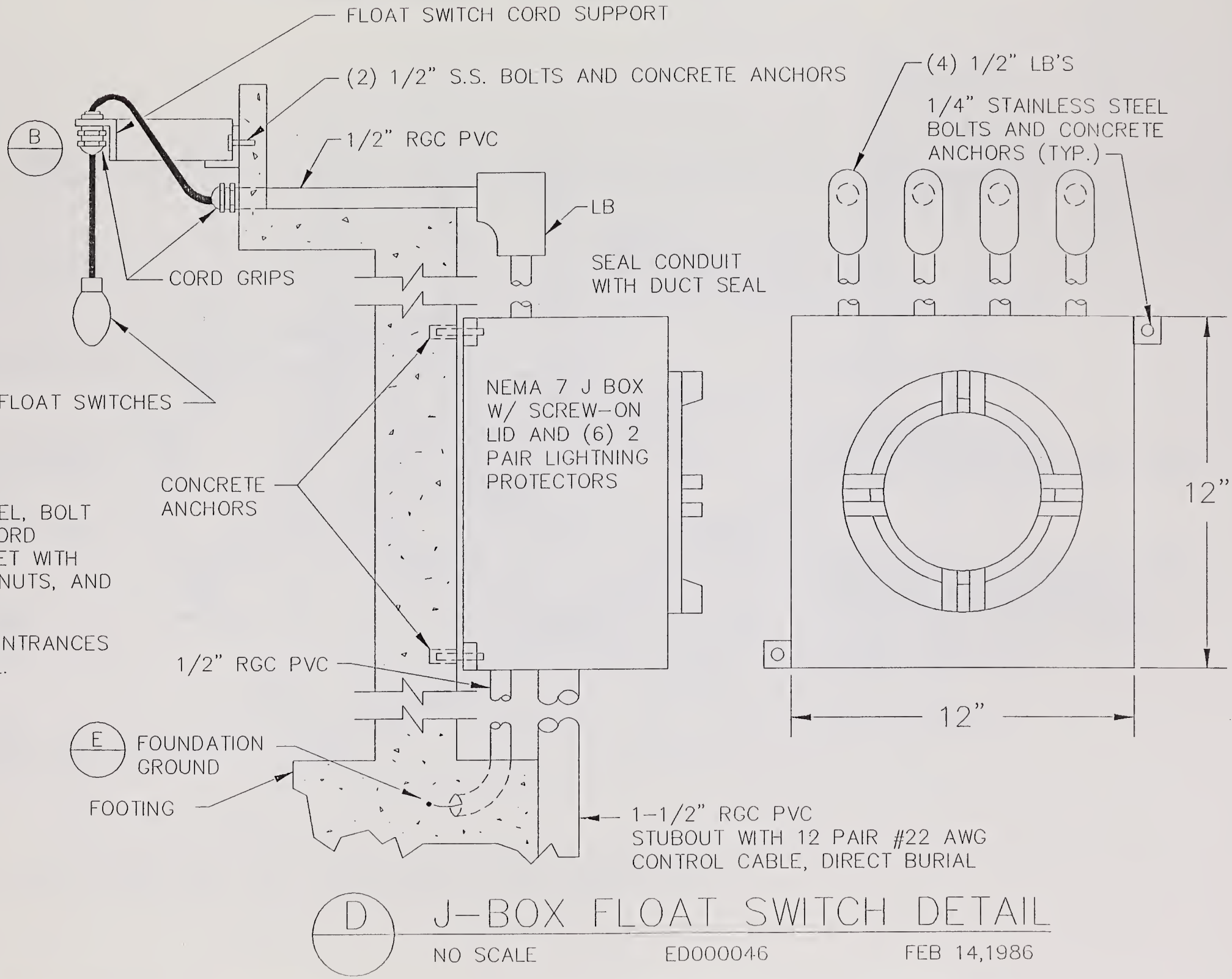
ELECTRICAL SYMBOLS



C

SECTION C-C FLOAT SWITCH MOUNTING

NO SCALE ED000045 FEB. 14,1986



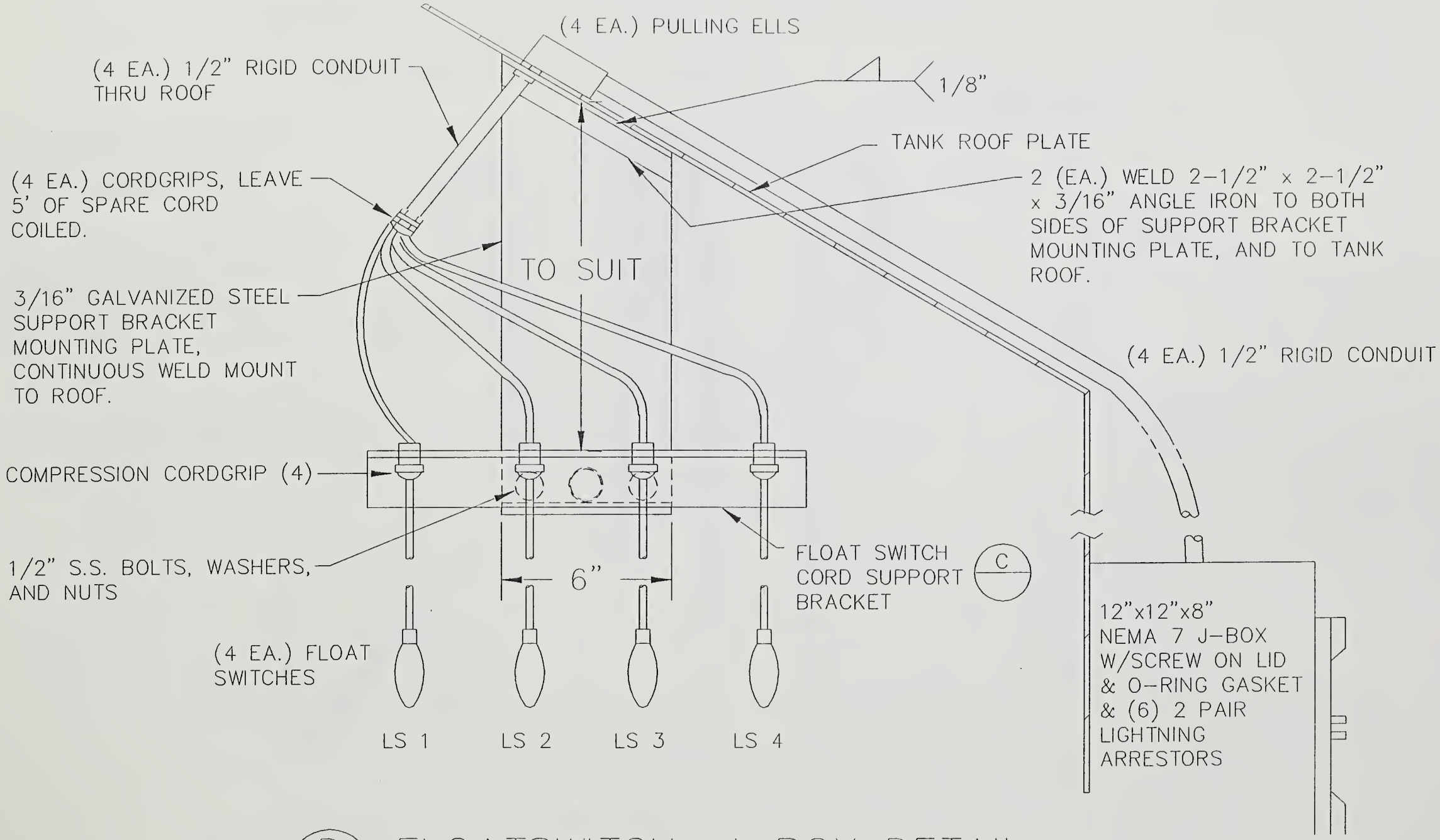
NOTES:

1. IF HATCH IS STEEL, BOLT FLOAT SWITCH CORD SUPPORT BRACKET WITH (2) S.S. BOLTS, NUTS, AND WASHERS.
2. SEAL CONDUIT ENTRANCES WITH DUCT SEAL.

D J-BOX FLOAT SWITCH DETAIL

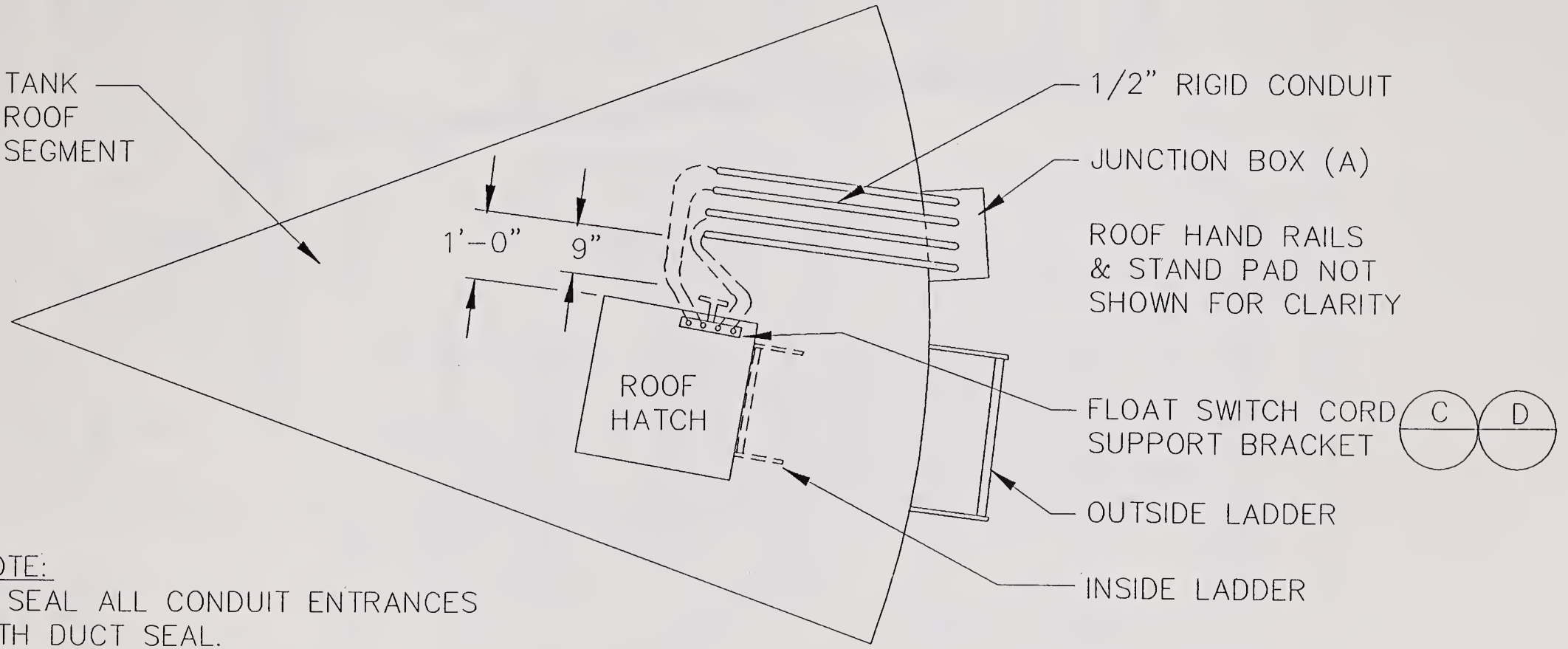
NO SCALE ED000046 FEB 14,1986

ELECTRICAL SYMBOLS



D FLOATSWITCH, J-BOX DETAIL

NO SCALE ED000047 FEB 14,1986

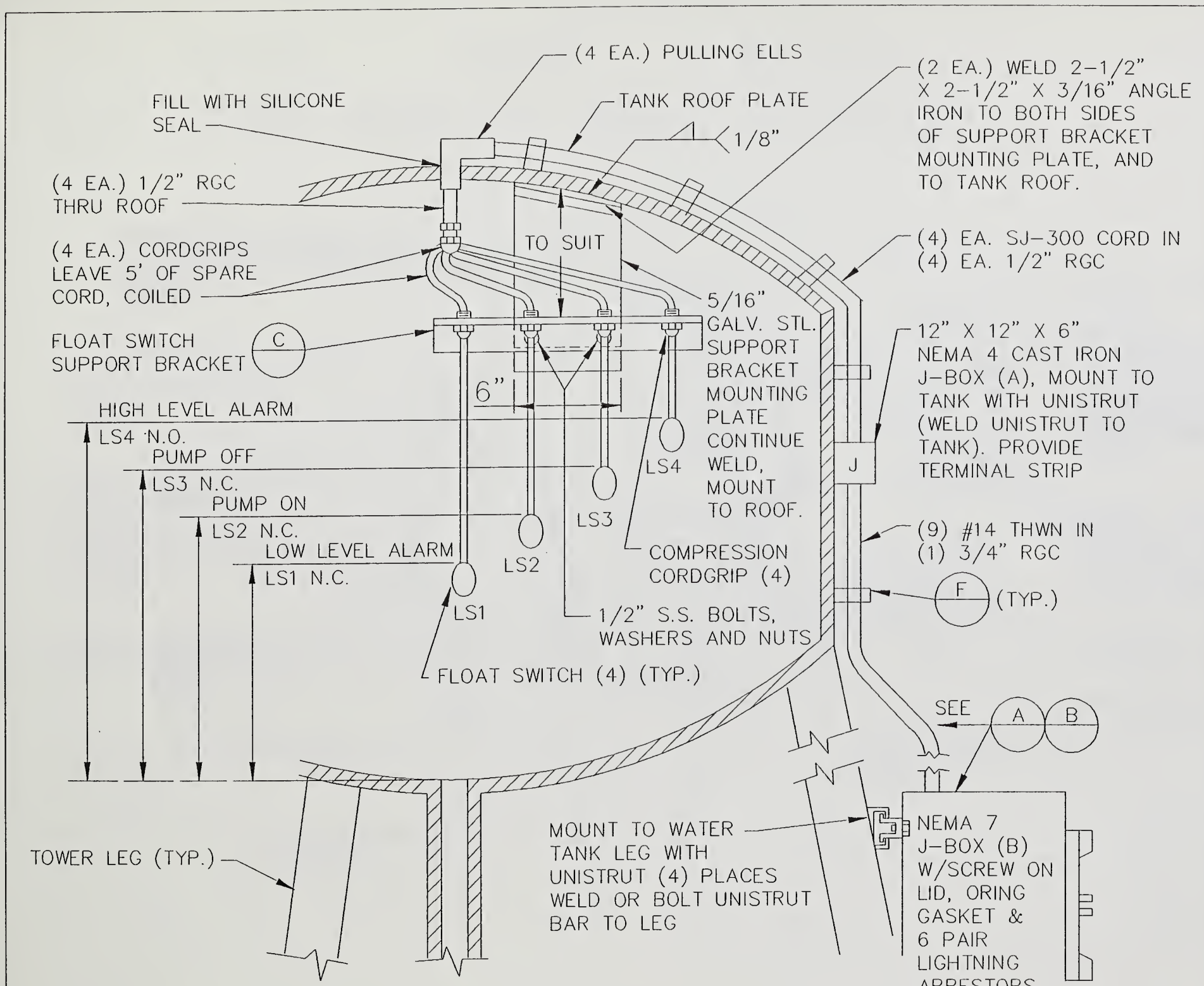


NOTE:
1. SEAL ALL CONDUIT ENTRANCES WITH DUCT SEAL.

E PLAN VIEW OF ROOF SEGMENT

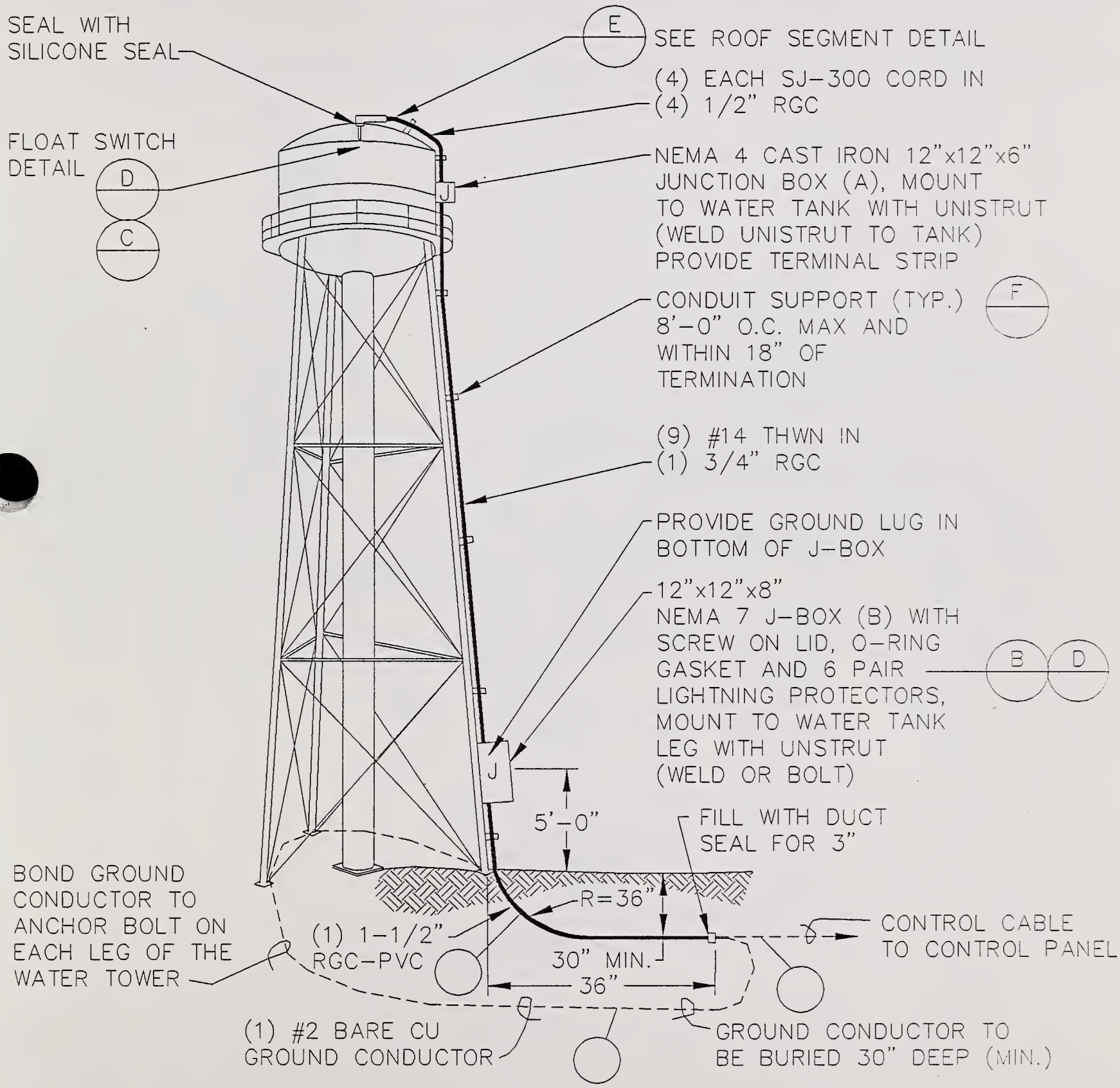
NO SCALE ED000048 FEB 14,1986

ELECTRICAL SYMBOLS



D FLOAT SWITCH J-BOX DETAIL

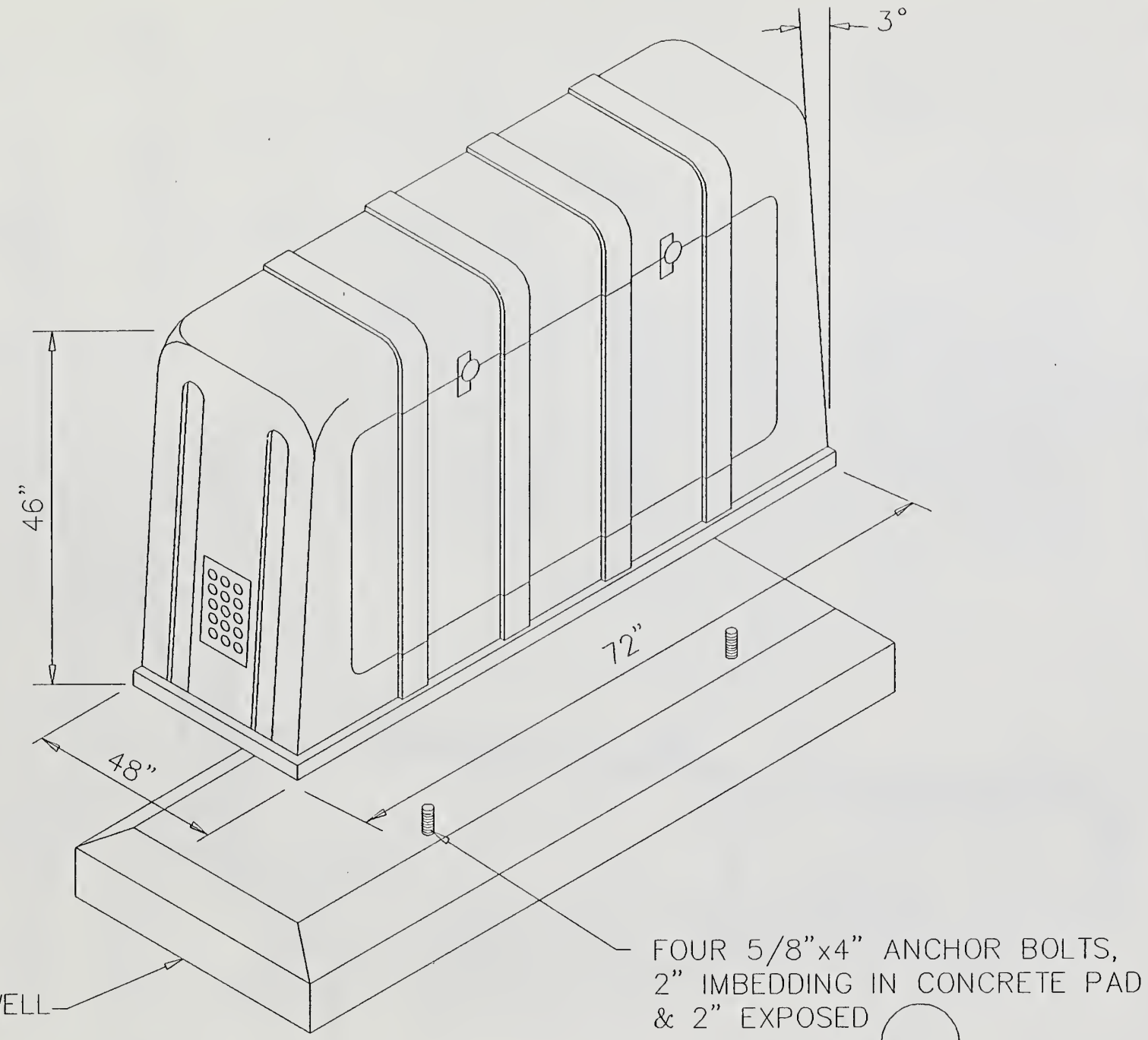
NO SCALE ED000049 FEB 14,198



A WATER TOWER CONDUIT, J-BOX & GROUND DETAIL

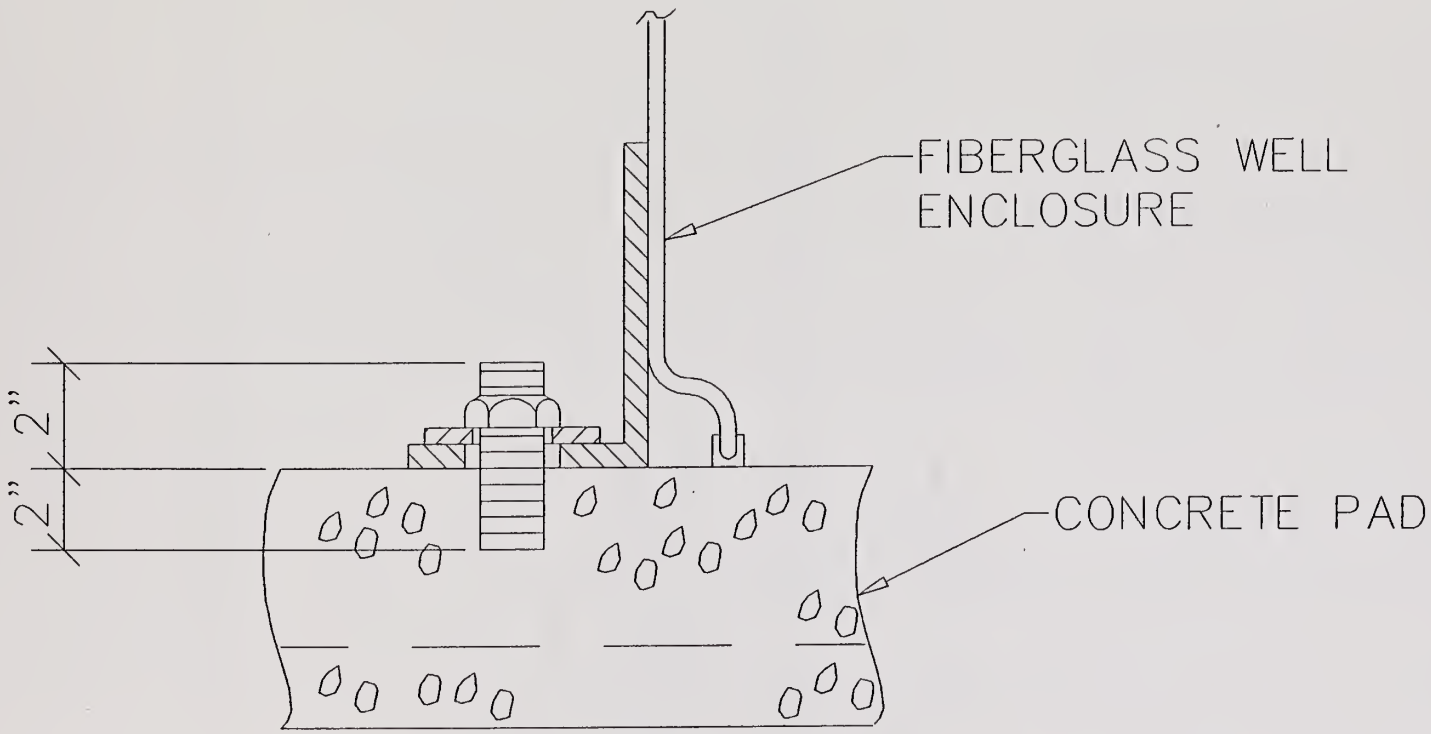
NO SCALE

ED000050 FEB 14,1986



FIBERGLASS WELL ENCLOSURE

NO SCALE ED000051 FEB. 14 1986

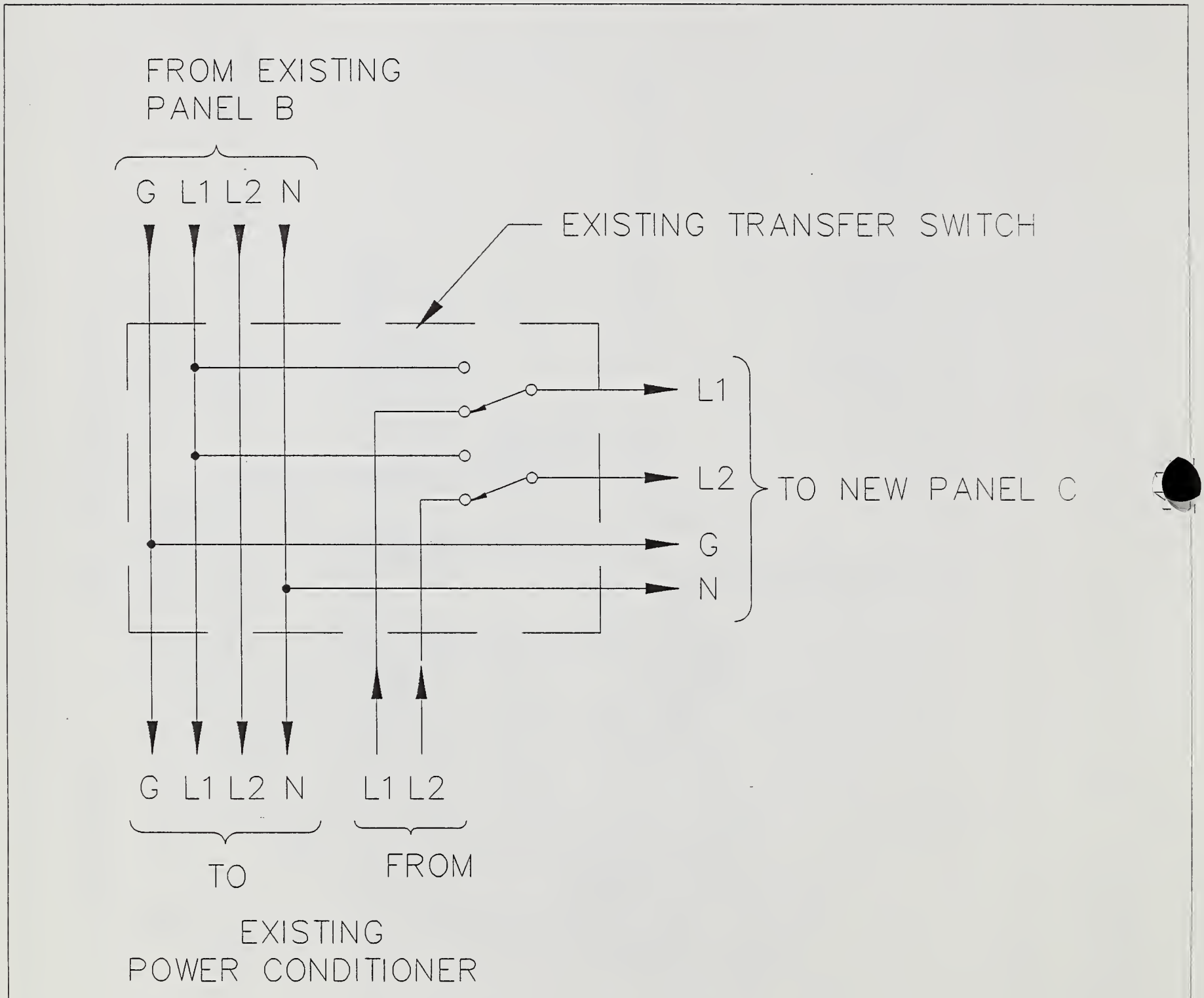


GALVANIZED STEEL CLIPS ARE MOLDED
TO INSIDE FACE OF THE ENCLOSURE TO
COINCIDE WITH ANCHOR BOLT LOCATIONS.

FIBERGLASS ENCLOSURE ANCHOR BOLT & HOLD DOWN CLIPS

NO SCALE ED000052 FEB. 14,1986

ELECTRICAL SYMBOLS



A / E1 TRANSFER SWITCH

ED000060 2/11/86

PANEL _____ LOCATION _____ CLASS _____

_____ AMP _____ VOLT _____ PHASE _____ WIRE

W= _____ L= _____ D= _____ PANELBOARD ☐ LOAD CENTER ☐

CIR. NO.	BKR. A	BKR. P	FDR. AWG	DESCRIPTION	LOAD A	LOAD B	LOAD C
1							
3							
5							
7							
9							
11							
2							
4							
6							
8							
10							
12							
MAIN BKR.				TOTAL VA			
TOTAL KVA				TOTAL AMPS			

BOTTOM ☐ SURFACE ☐ S.NEUT. ☐ FEEDER ____ ISOL. NEUT. ☐

TOP ☐ FLUSH ☐ I.G.BUSS ☐ AIC _____ REG. GND. BUS ☐

G = GFI BREAKER 3/2/88 ED000072

PANEL _____ LOCATION _____ CLASS _____

_____ AMP _____ VOLT _____ PHASE _____ WIRE

W= _____ L= _____ D= _____ PANELBOARD ☐ LOAD CENTER ☐

CIR. NO.	BKR. A	BKR. P	FDR. AWG	DESCRIPTION	LOAD A	LOAD B	LOAD C
1							
3							
5							
7							
9							
11							
13							
15							
17							
19							
21							
23							
25							
27							
29							
2							
4							
6							
8							
10							
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
MAIN BKR.				TOTAL VA			
TOTAL KVA				TOTAL AMPS			

BOTTOM ☐ SURFACE ☐ S.NEUT. ☐ FEEDER ____ ISOL. NEUT. ☐

TOP ☐ FLUSH ☐ I.G.BUSS ☐ AIC _____ REG. GND. BUS ☐

G = GFI BREAKER 3/2/88 ED000074

PANEL _____ LOCATION _____ CLASS _____

_____ AMP _____ VOLT _____ PHASE _____ WIRE

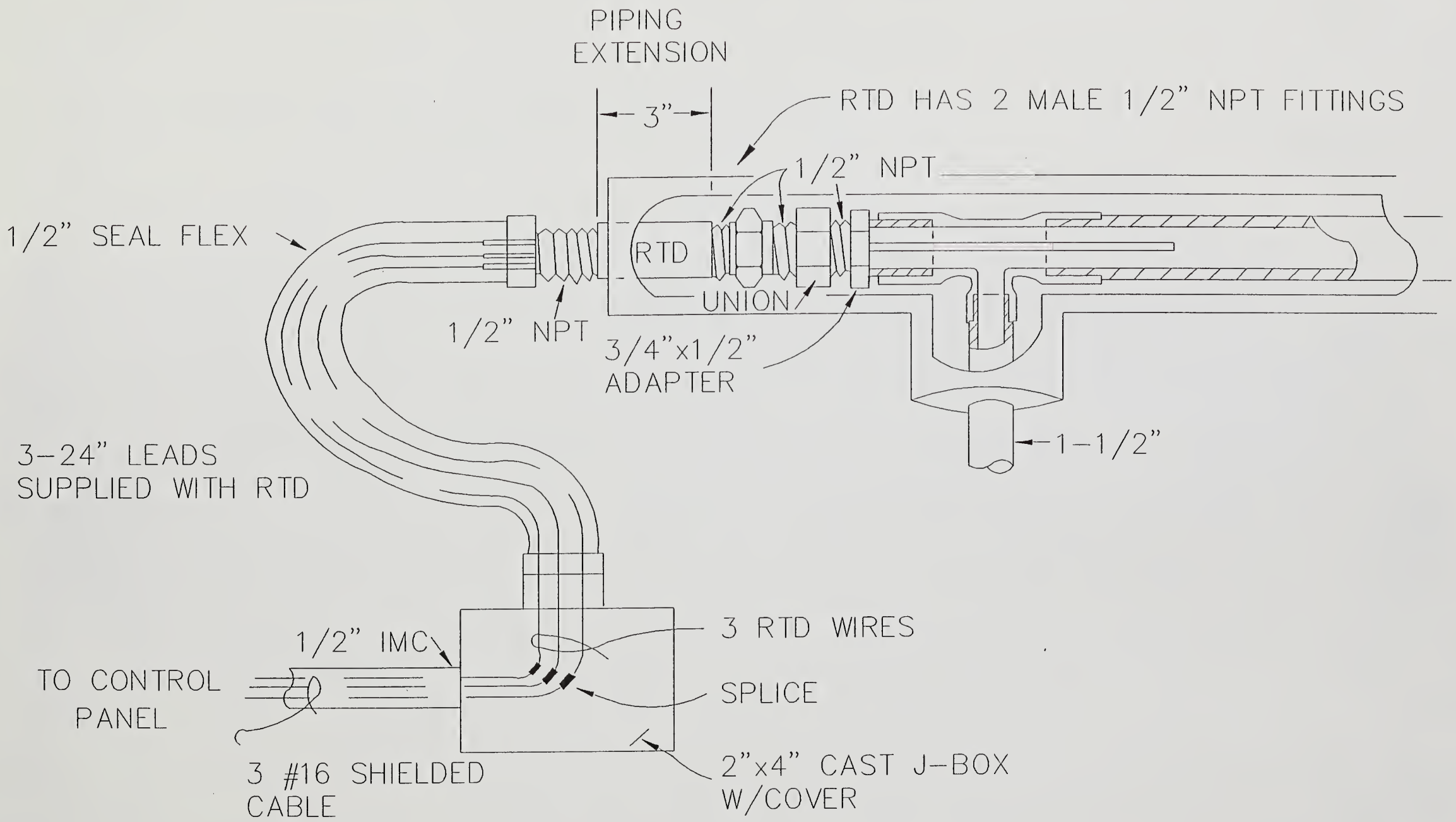
W=_____ L=_____ D=_____ PANELBOARD ☐ LOAD CENTER ☐

[illegible]	BKR. A	BKR. P	FDR. AWG	DESCRIPTION	LOAD A	LOAD B	LOAD C
1							
3							
5							
7							
9							
11							
13							
15							
17							
19							
21							
23							
25							
27							
29							
31							
33							
35							
37							
39							
[illegible]							
4							
6							
8							
10							
12							
14							
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							
36							
38							
40							
42							
[illegible]N BKR.				TOTAL VA			
[illegible]TAL KVA				TOTAL AMPS			

BOTTOM ☐ SURFACE ☐ S.NEUT. ☐ FEEDER ____ ISOL. NEUT. ☐

TOP ☐ FLUSH ☐ I.G.BUSS ☐ AIC _____ REG. GND. BUS ☐

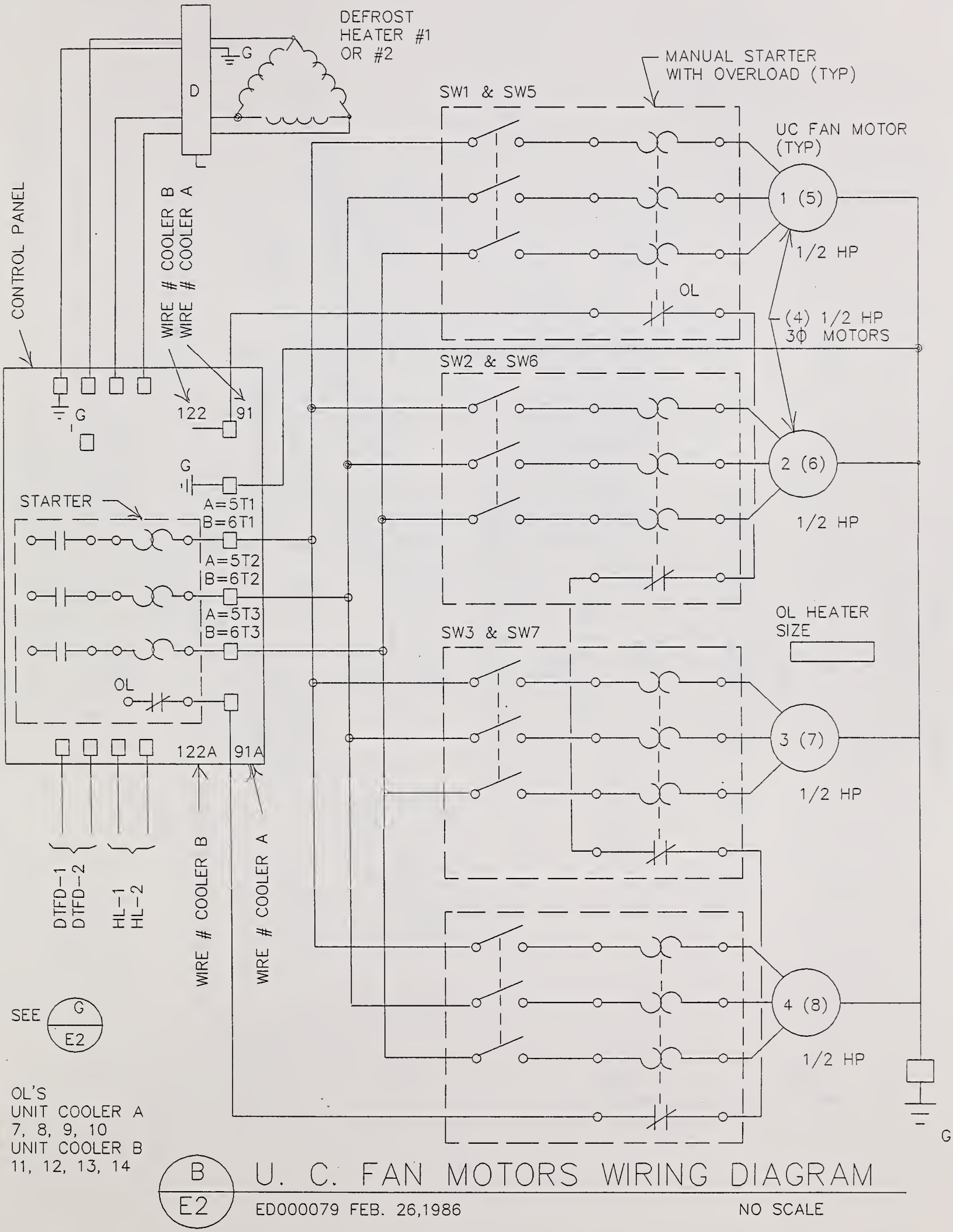
G = GFI BREAKER 3/2/88 ED000075



A E2 RTD-3 WIRE MOUNTING DETAIL

ED000078 FEB. 26,1986

NO SCALE

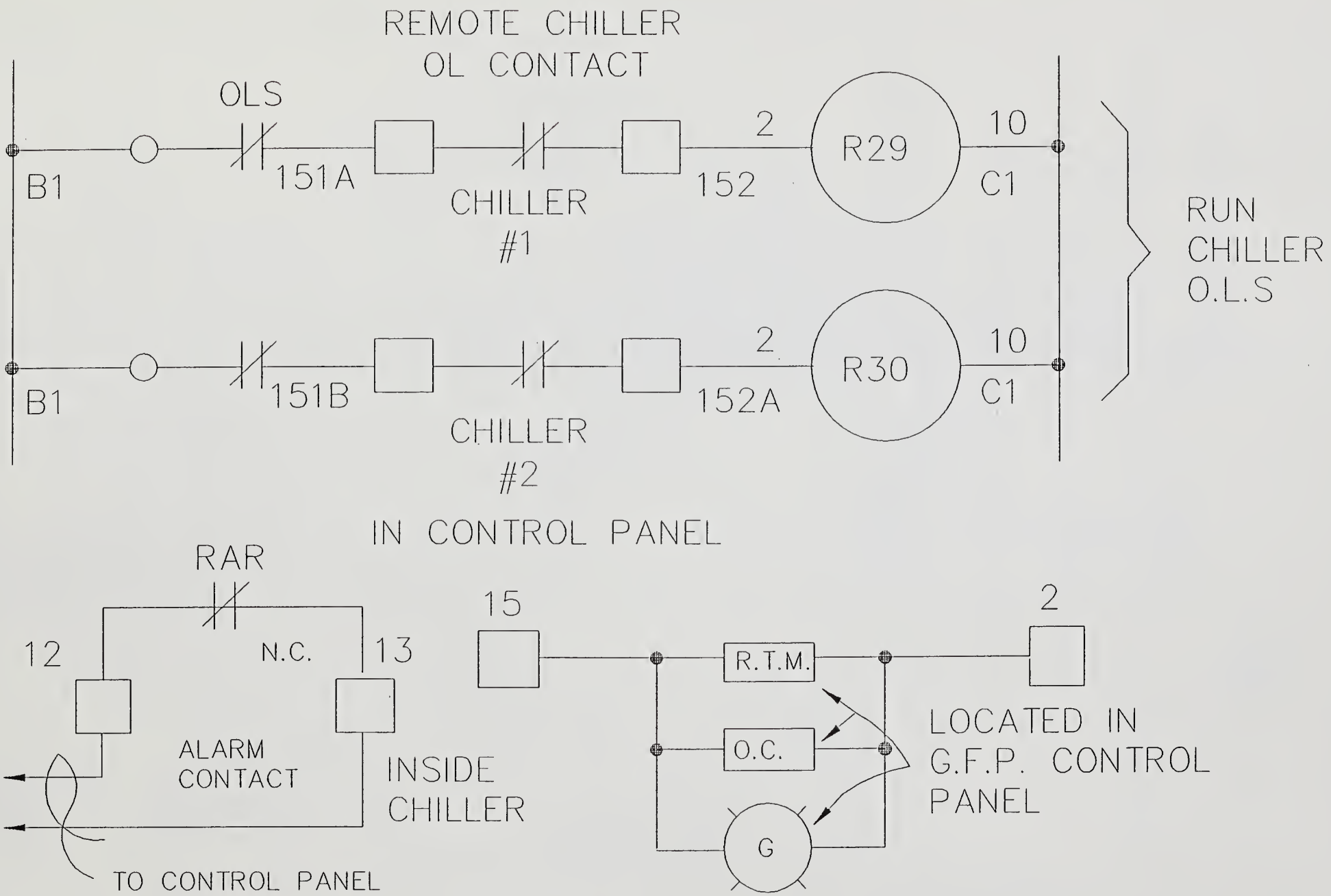


B / E2

U. C. FAN MOTORS WIRING DIAGRAM

ED000079 FEB. 26,1986

NO SCALE

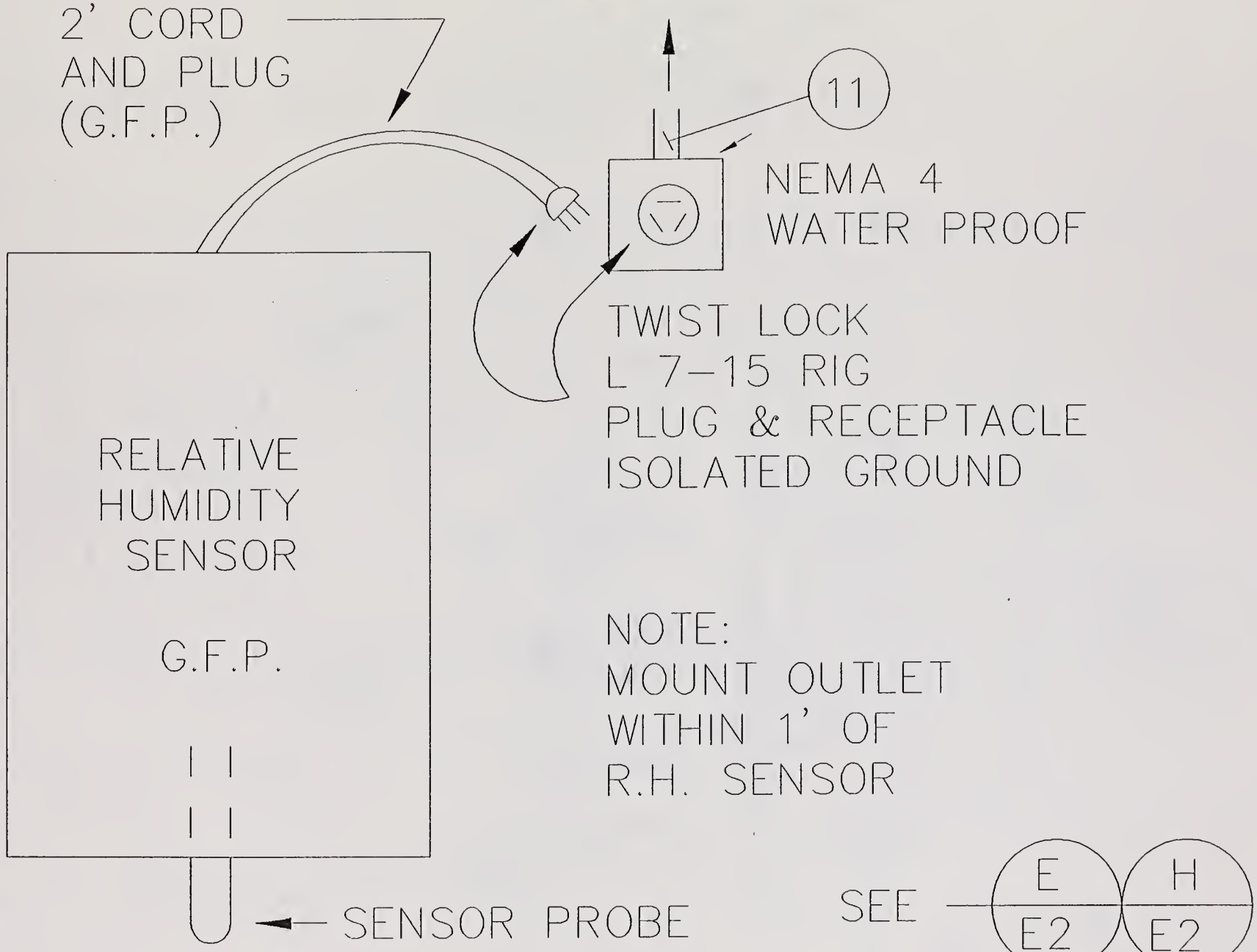


C
E2

CHILLER 1 & 2 CONTROL WIRING CONNECTIONS

NO SCALE

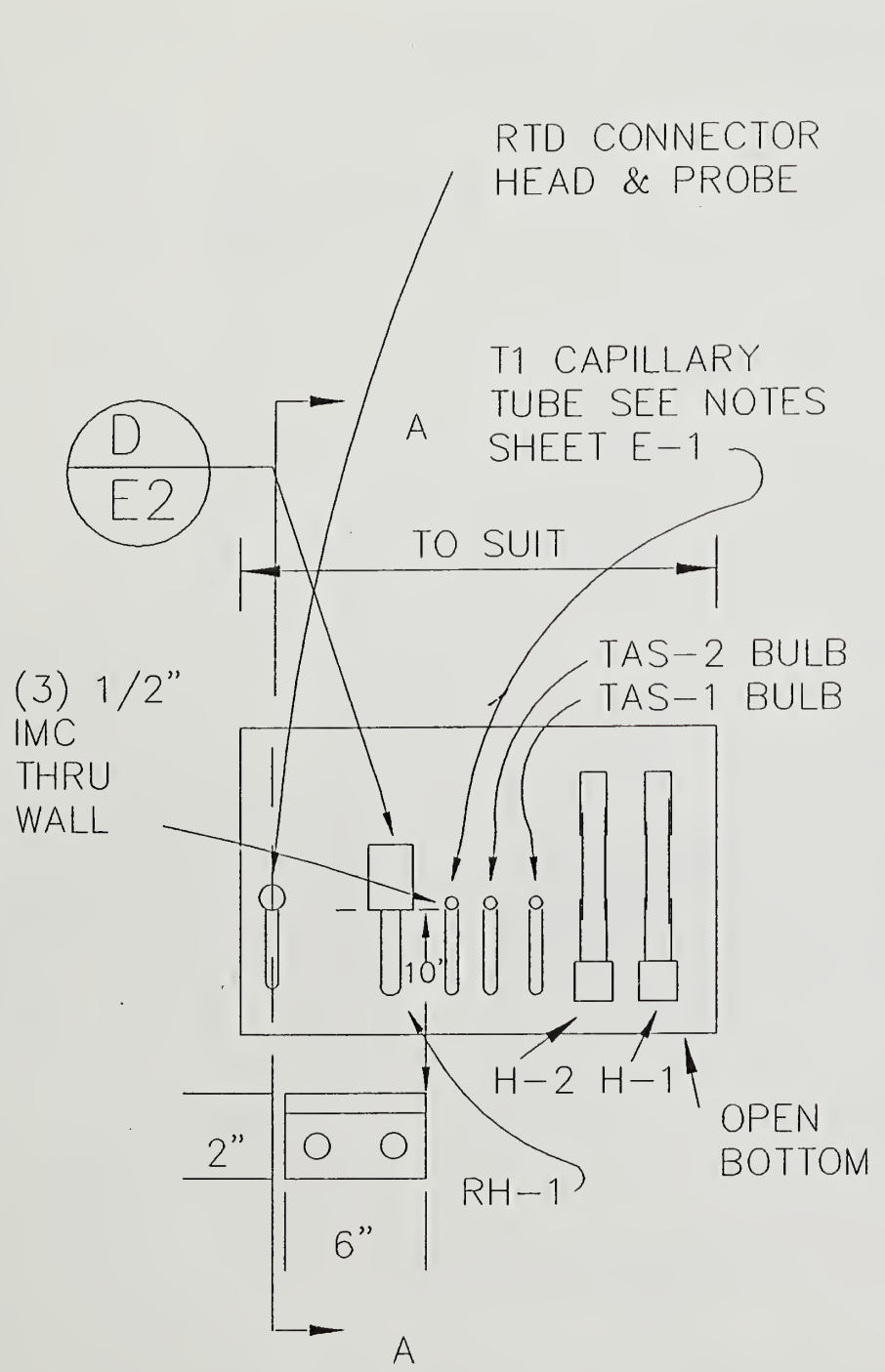
ED000080 FEB. 26,1986

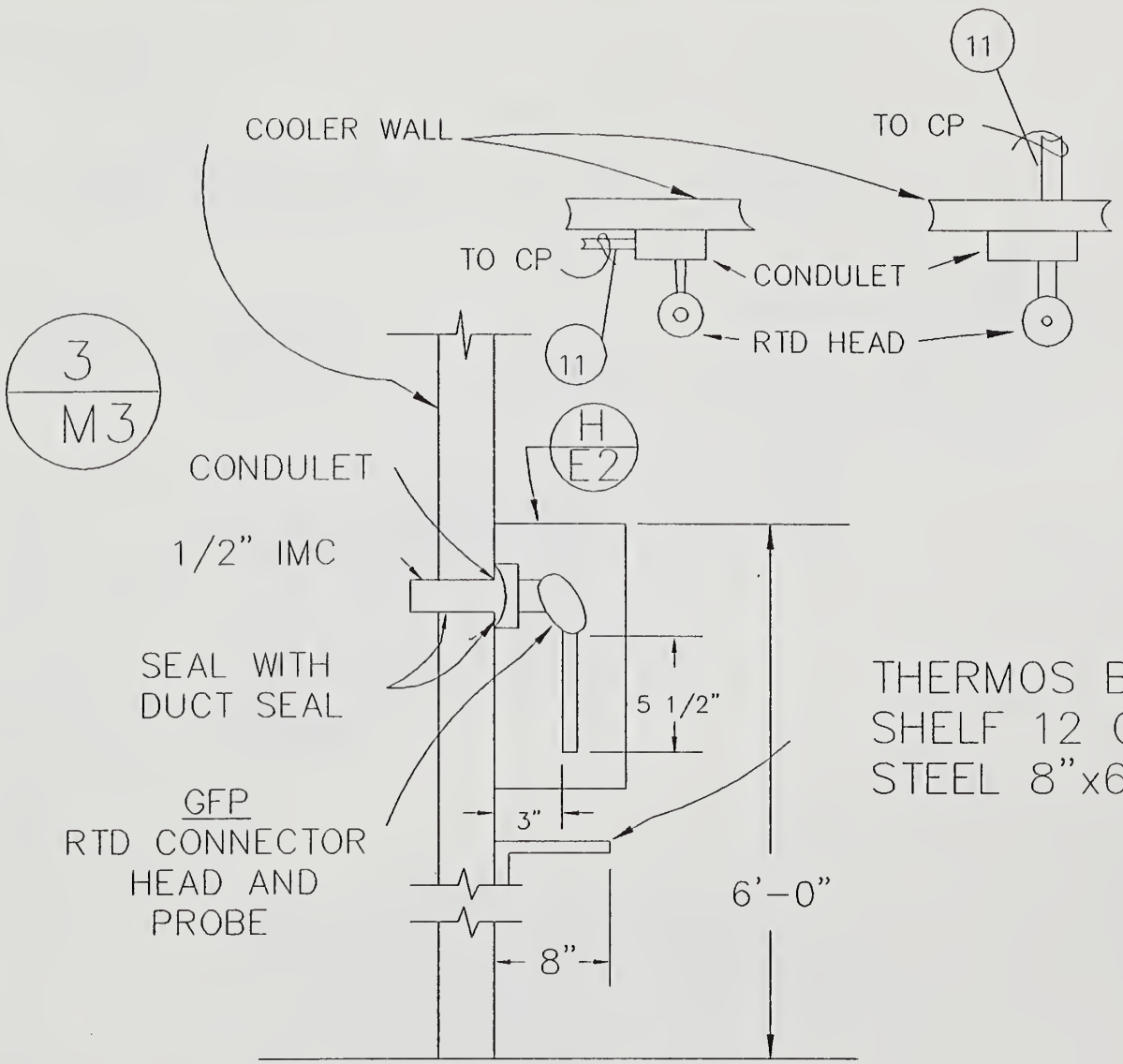


D / E2 R.H.-1 MOUNTING DETAIL

ED000081 FEB. 26,1986

NO SCALE





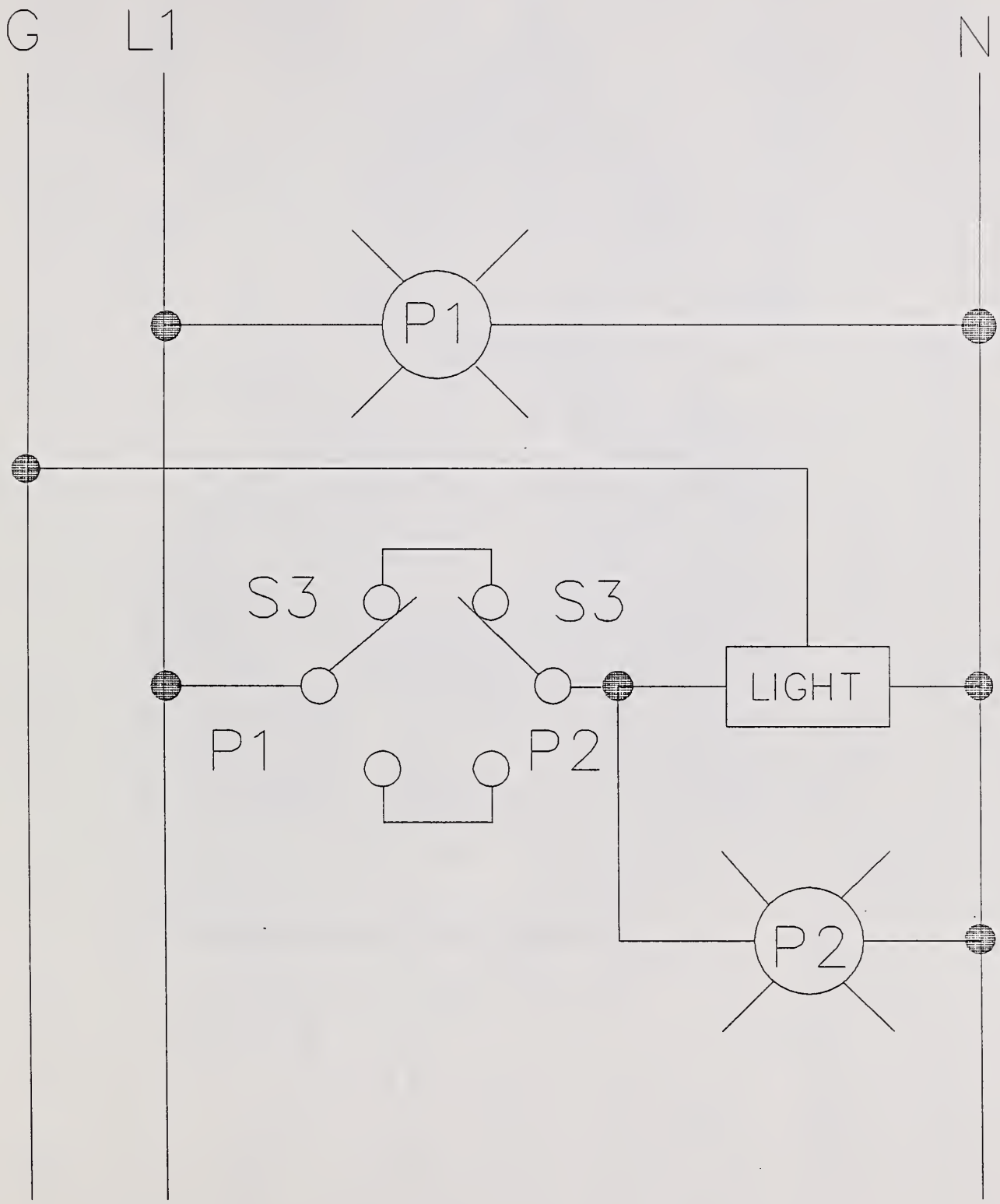
THERMOS BOTTLE SHELF 12 GA. GALV. STEEL 8"x6"x2"

SECTION A-A

E/E2 SENSOR MOUNTING DETAIL

ED000082 FEB. 26,1986

NO SCALE



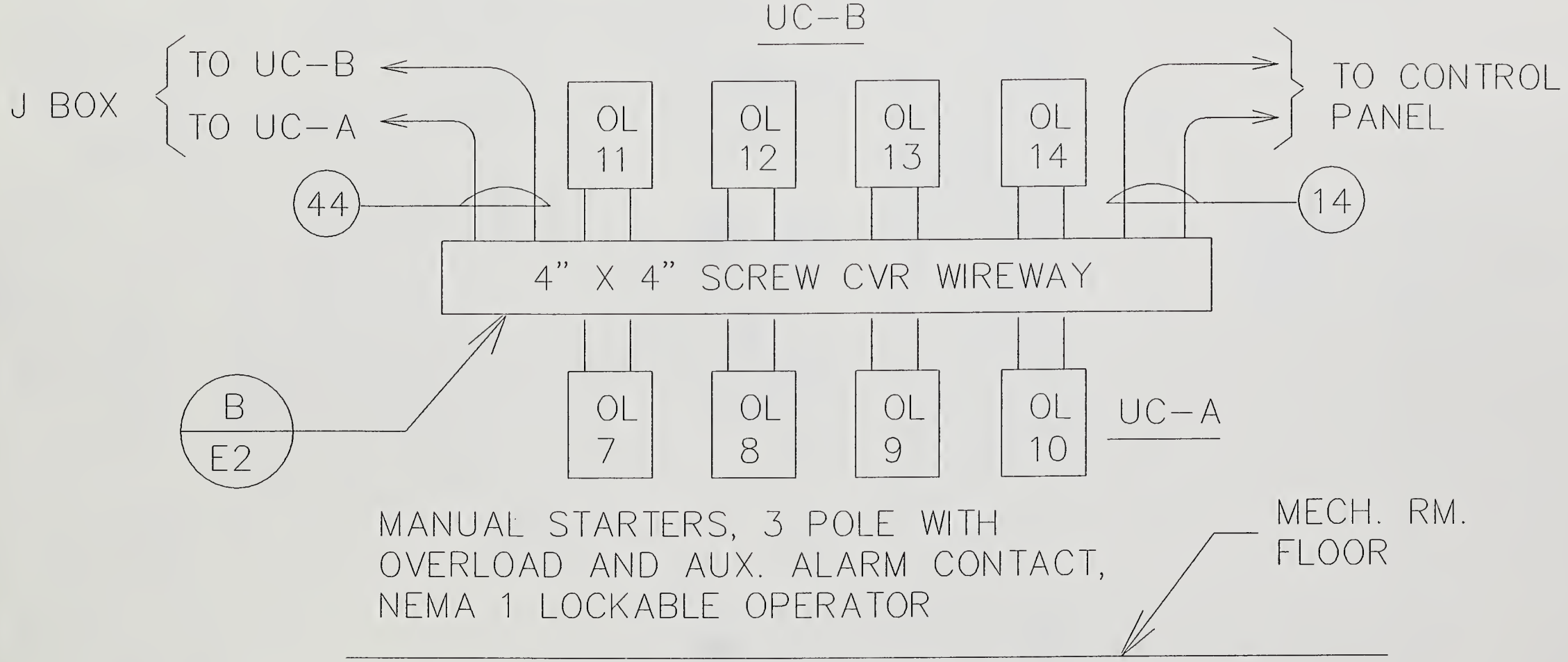
F

E2

PILOT LIGHTS & 3-WAY SWITCH WIRING DIAGRAM

ED000083 FEB. 26,1986

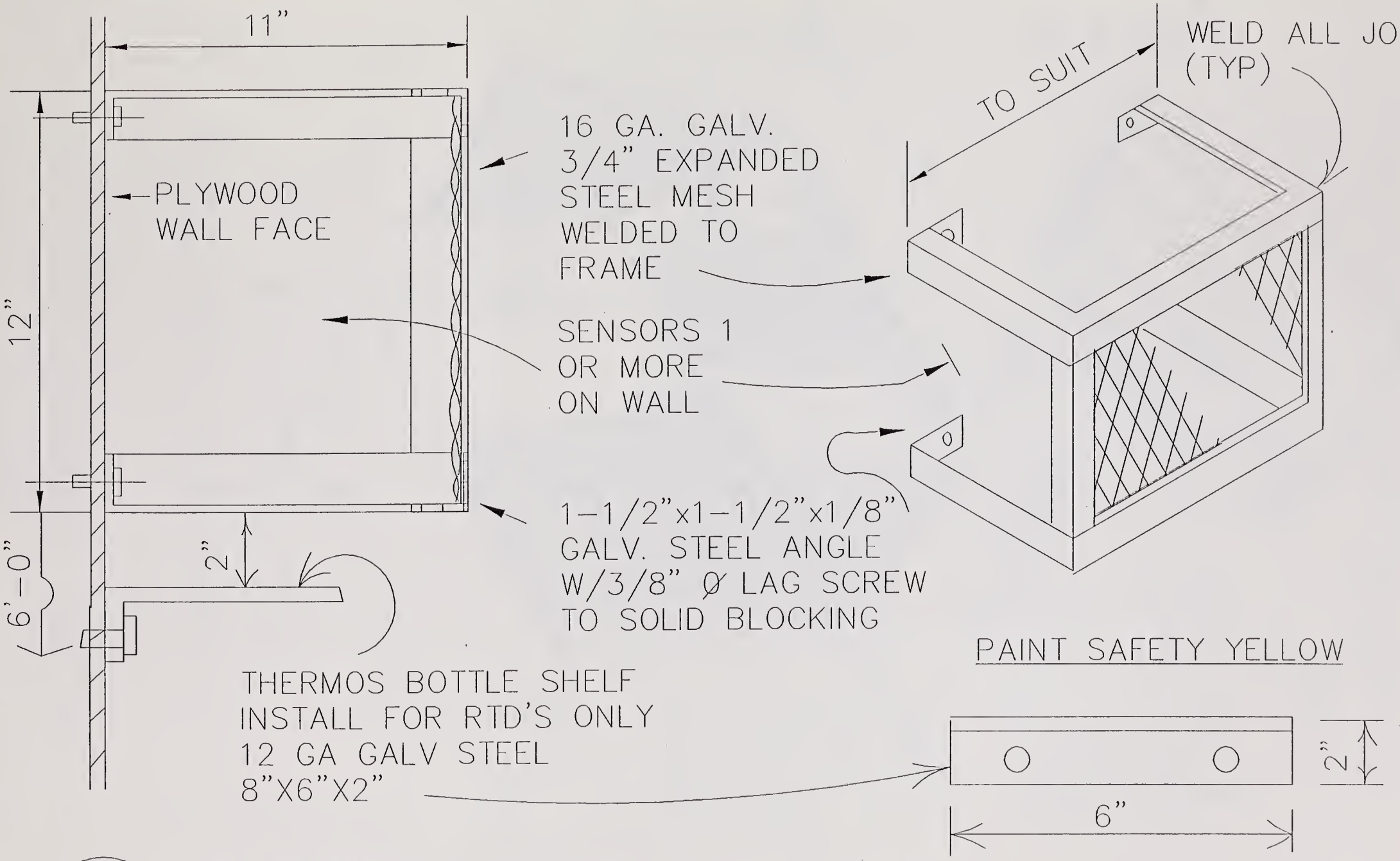
NO SCALE



G
E2

U.C. FANS–O.L. DETAIL

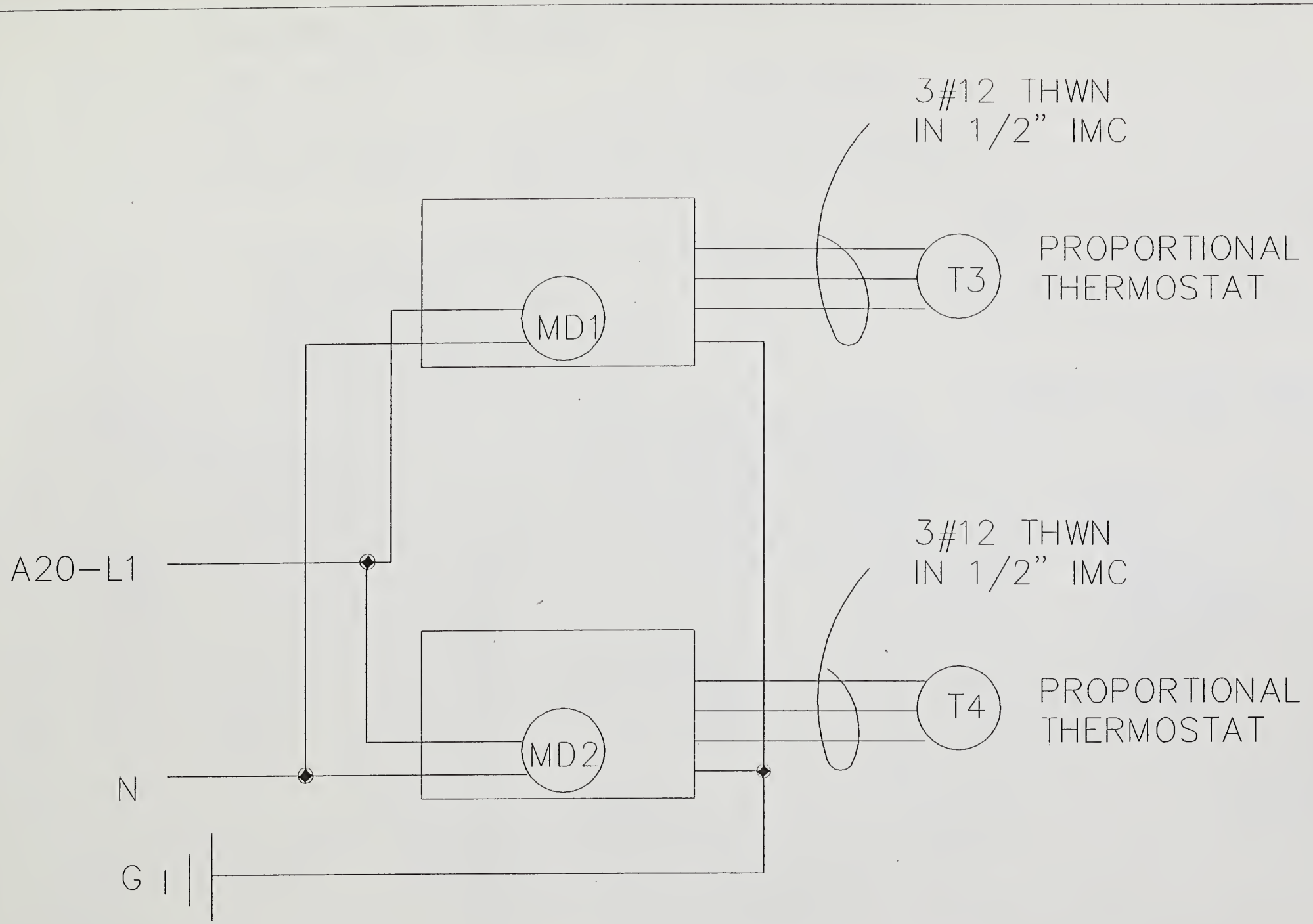
ED000084 FEB. 26,1986 NO SCALE



H / E2 SENSING DEVICE COVER DETAIL

NO SCALE

ED000085 FEB. 26,1986

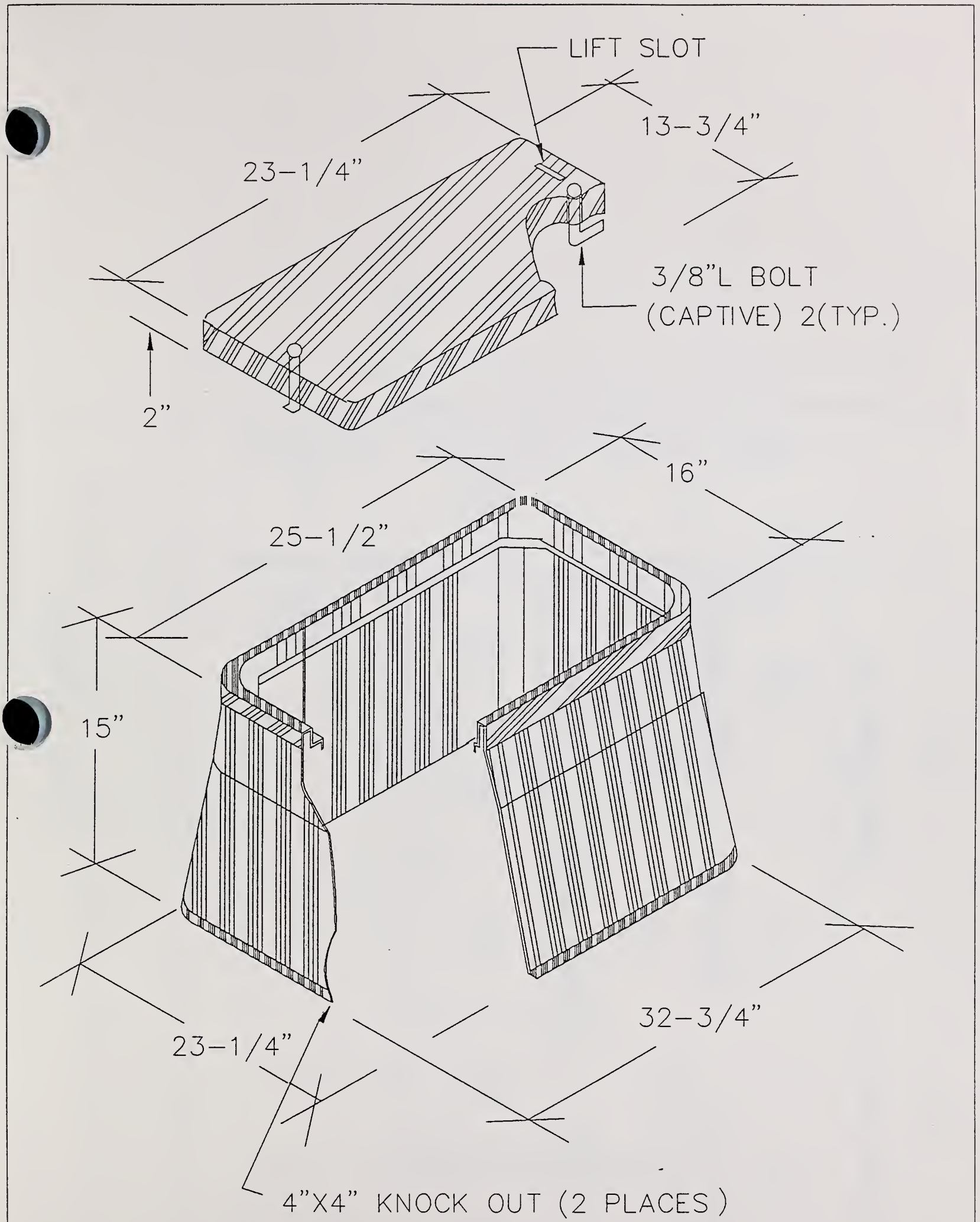


MOTORIZED DAMPERS DETAIL

1 / E2

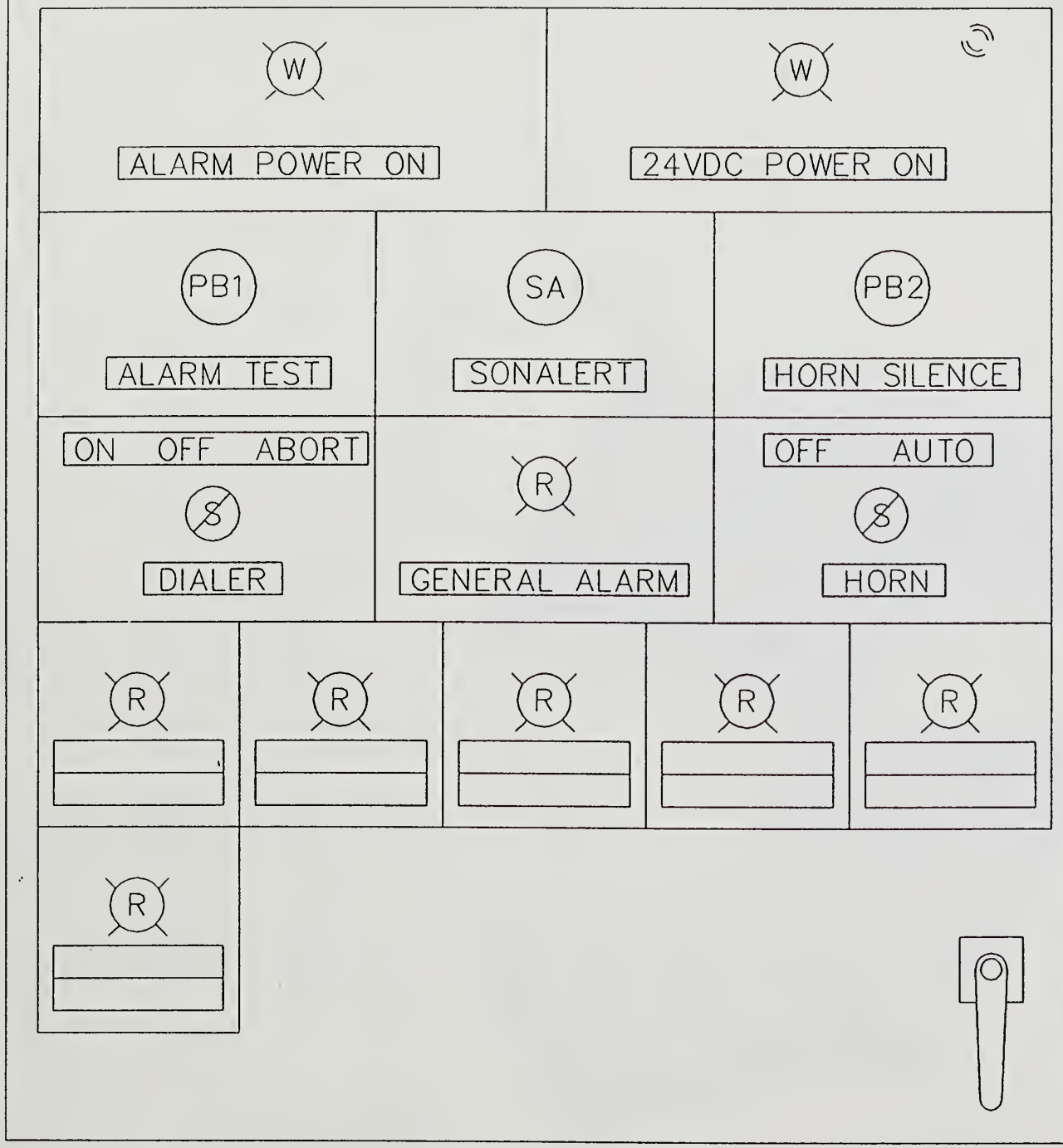
ED000086 FEB. 26,1986

NO SCALE



1/E2 SPLICE VAULT (PLASTIC)

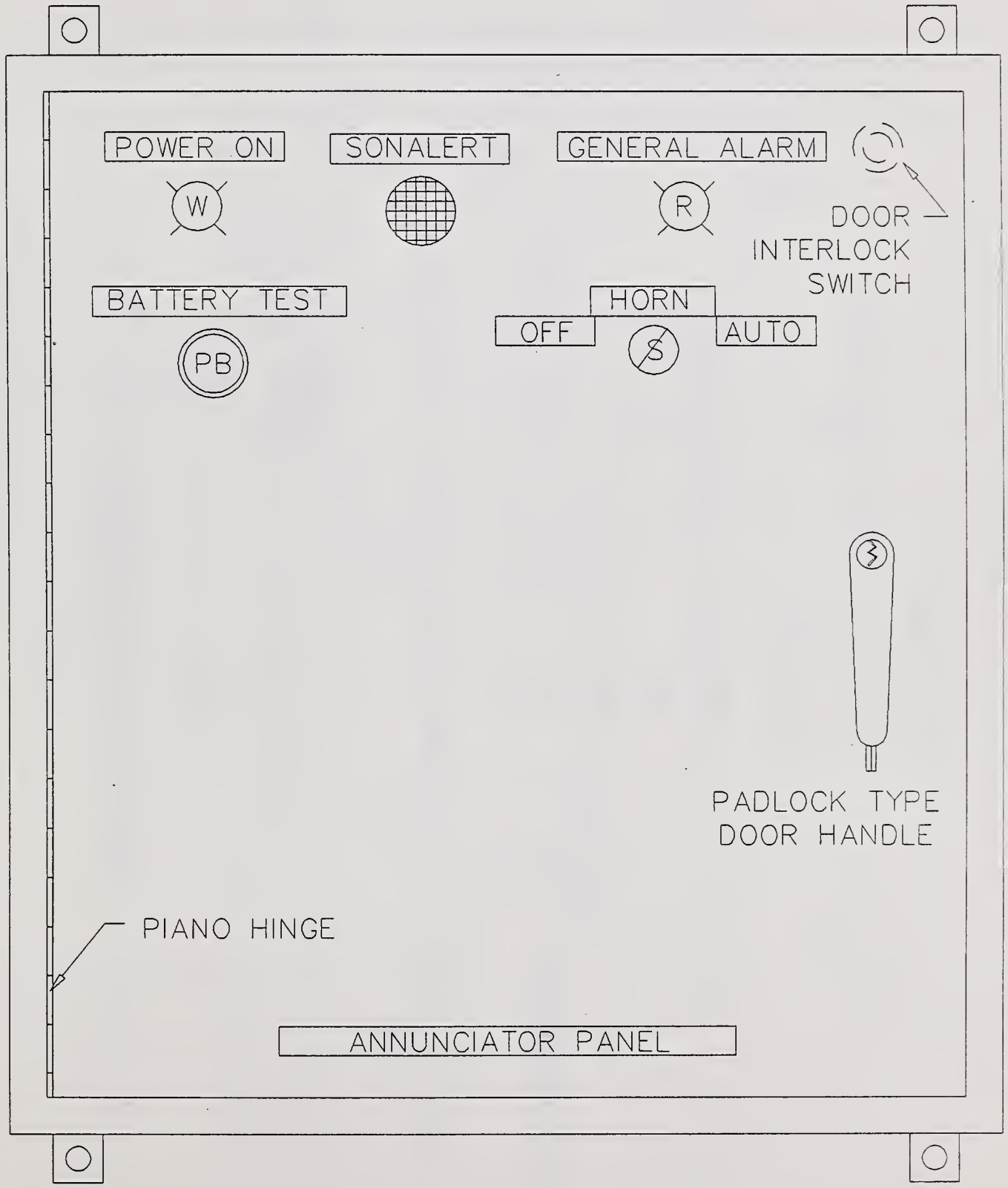
NO SCALE ED000094 JULY 16,1986



ANNUNCIATOR CONTROL ENCLOSURE

NO SCALE

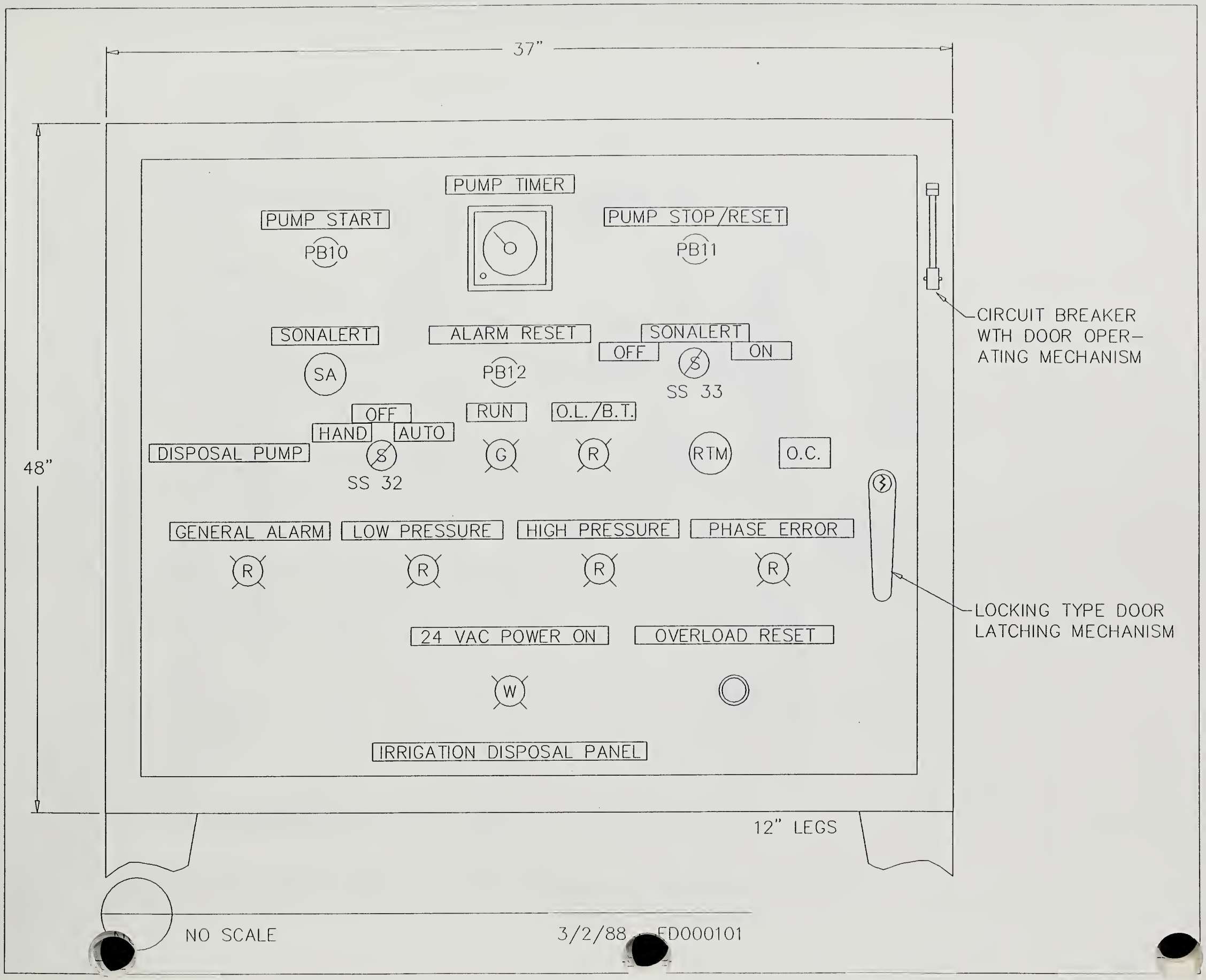
3/2/88 ED000099



ANNUNCIATOR FRONT PANEL LAYOUT

NO SCALE

3/2/88 ED000100

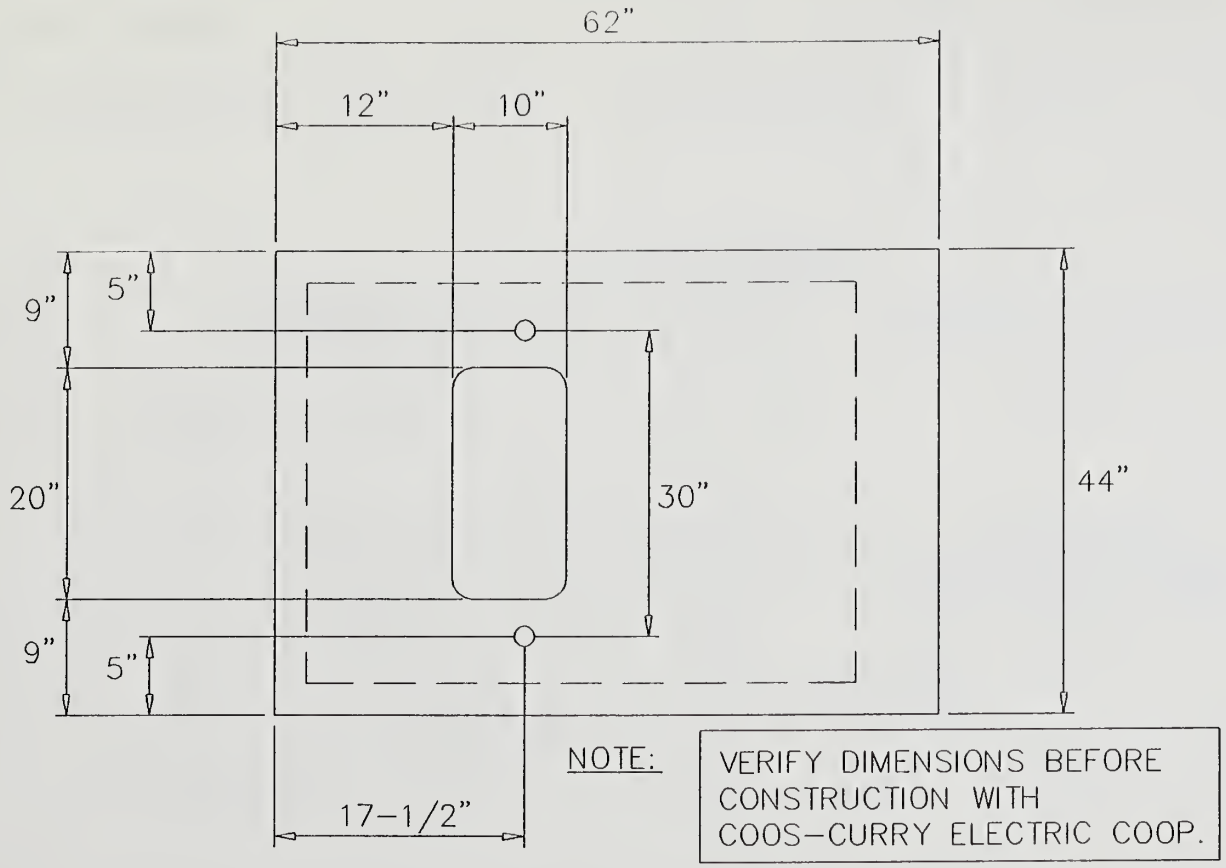

37"
48"
PUMP TIMER
PUMP START
PB10
PUMP STOP/RESET
PB11
SONALERT
SA
ALARM RESET
PB12
SONALERT
OFF
ON
SS 33
OFF
HAND
AUTO
DISPOSAL PUMP
SS 32
RUN
G
O.L./B.T.
R
RTM
O.C.
GENERAL ALARM
LOW PRESSURE
HIGH PRESSURE
PHASE ERROR
R
R
R
R
24 VAC POWER ON
OVERLOAD RESET
W
IRRIGATION DISPOSAL PANEL
CIRCUIT BREAKER WTH DOOR OPER-ATING MECHANISM
LOCKING TYPE DOOR LATCHING MECHANISM
12" LEGS
NO SCALE
3/2/88
ED000101

A.C. SYSTEM POWER (W)	GENERAL ALARM (R)
D.C. SYSTEM POWER (W)	ALARM HORN SILENCE PB10
(R) PUMP STATION "B.I.A."	SONA-LERT ALARM (LOCATE IN PANEL FACE)
(R) PUMP STATION "A"	
(R) PUMP STATION "B"	
(R) PUMP STATION "C"	
(R) PUMP STATION 1	
(R) PUMP STATION "2"	
(R) SEWAGE TREATMENT PLANT	
(R) WILLABY WATER SYSTEM	
(R) PUMP STATION "E"	
(R) SPARE	

ANNUNCIATOR CONTROL ENCLOSURE

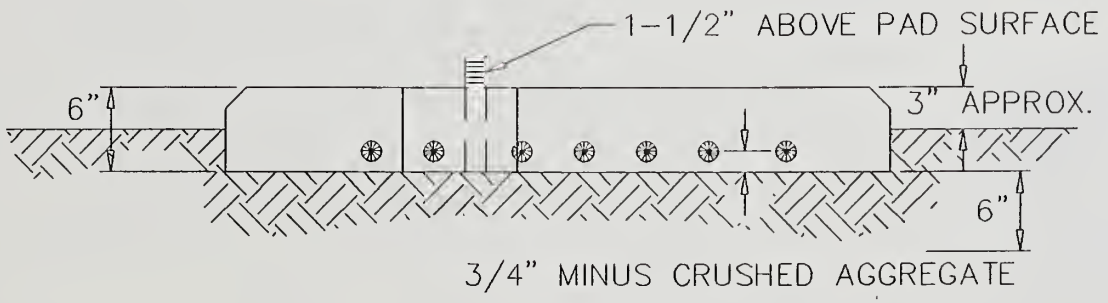
NO SCALE

3/2/88 ED000102



NOTE:

VERIFY DIMENSIONS BEFORE CONSTRUCTION WITH COOS-CURRY ELECTRIC COOP.



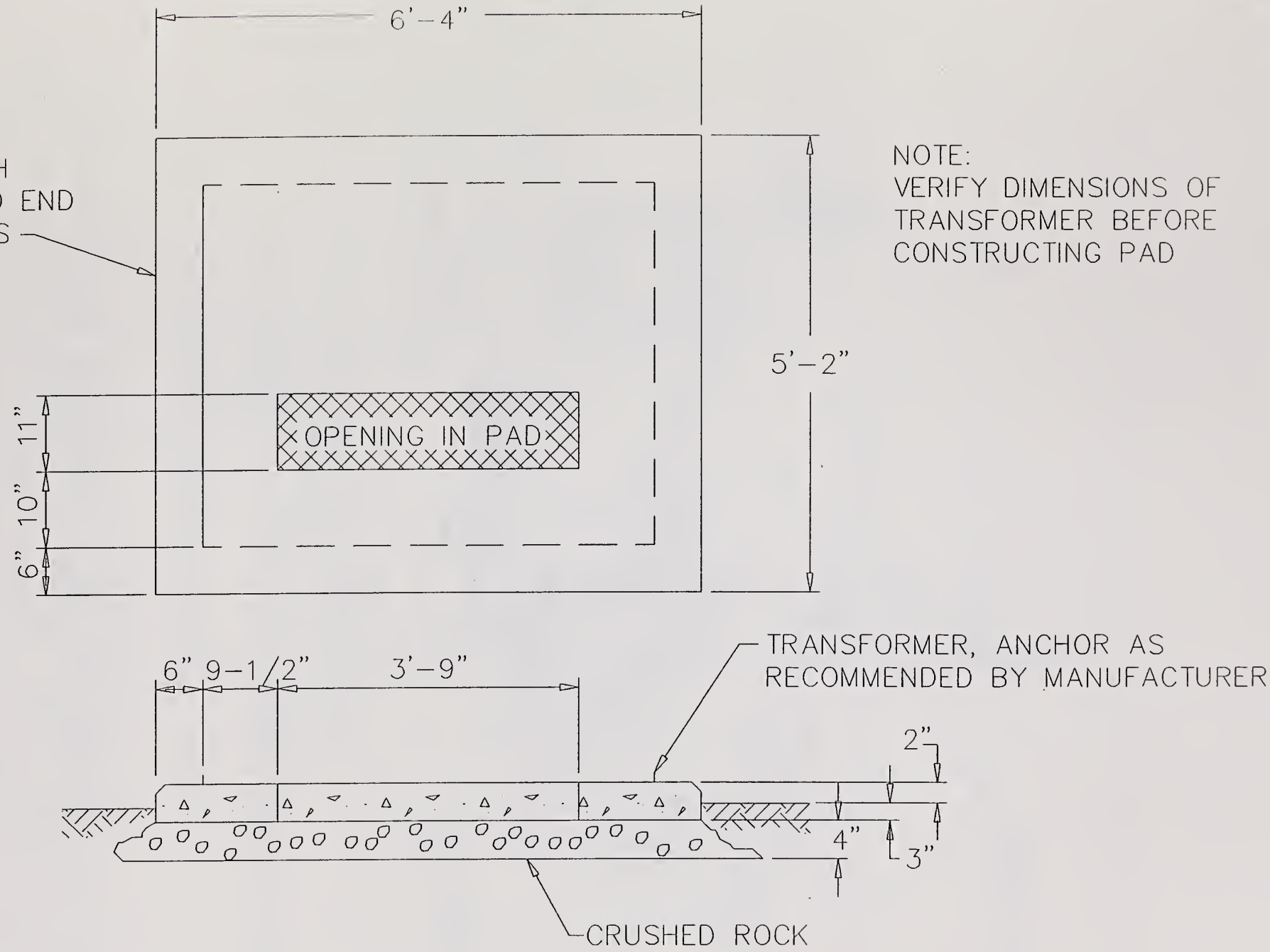
3/4" MINUS CRUSHED AGGREGATE

NOTES:

1. PAD ASSEMBLIES INCLUDE SITE PREPARATION, BEDDING AND DRAINAGE.
2. SLAB MAY BE PRECAST OR POURED IN PLACE. CONCRETE SHALL BE 1:2:4 MIXTURE WITH A MINIMUN DESIGN STRENGTH OF 3000 PSI. STEEL REINFORCING SHALL BE 6"x6" NO. 10 WIRE MESH TO STOP 1" FROM SIDES AND CABLE OPENING.
3. ANCHOR BOLTS 5/8" DIAMETER TO EXTEND A MINIMUM OF 1-1/2" ABOVE PAD SURFACE.

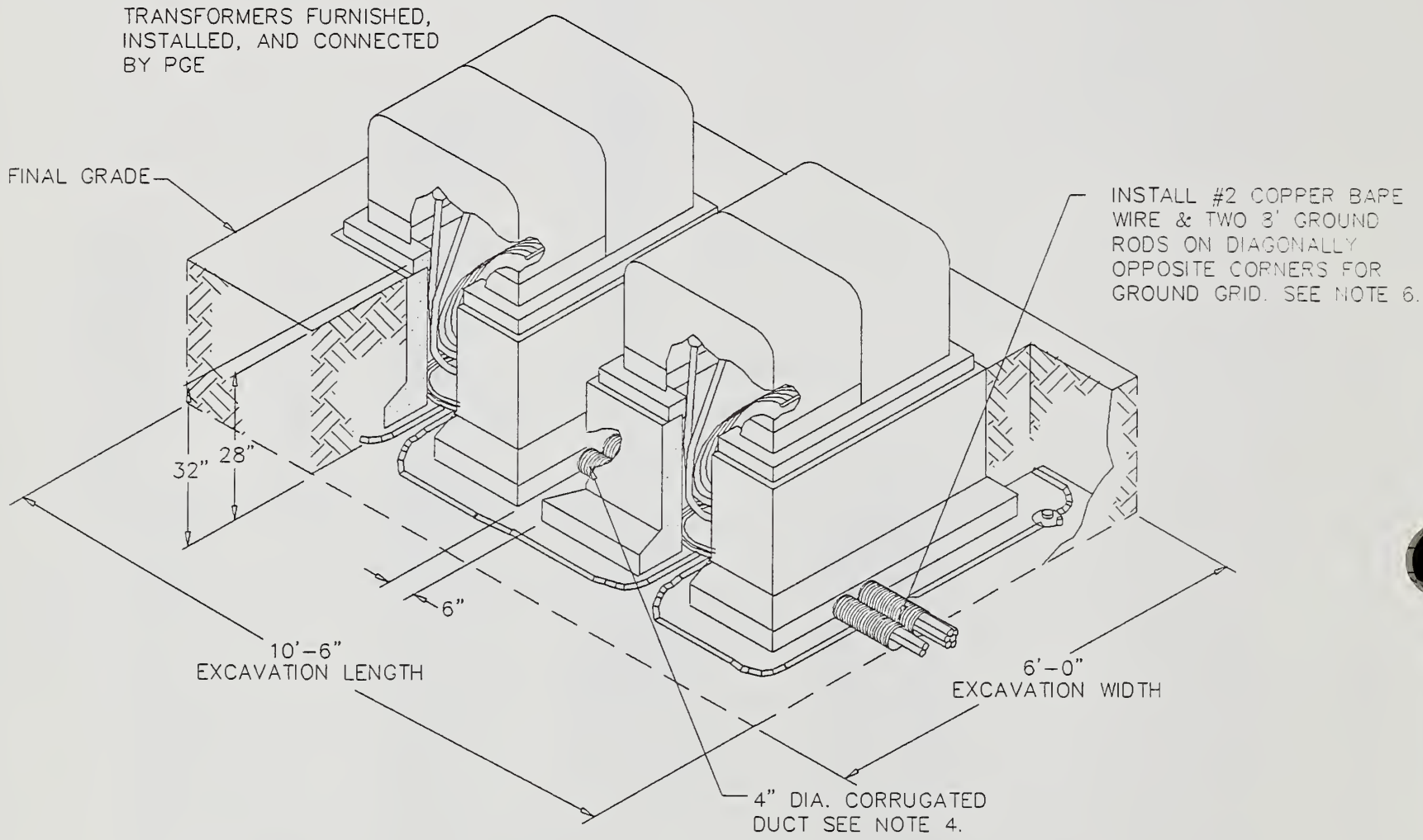
POWER PAD DETAIL

NO SCALE 3/2/88 ED000105



TRANSFORMER PAD DETAIL

NO SCALE 3/2/88 ED000106



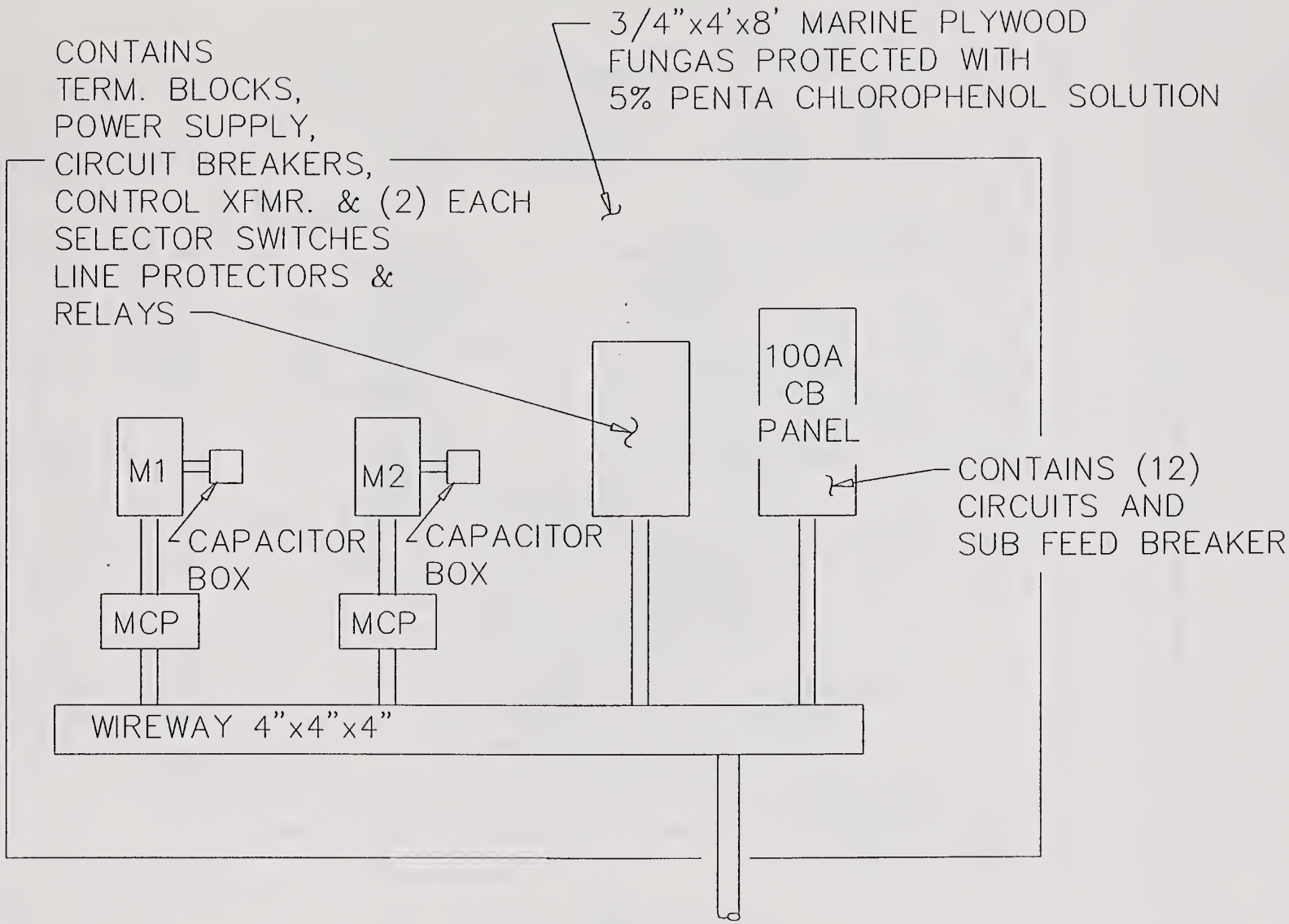
CONTRACTOR TO FURNISH AND INSTALL VAULT, CONDUIT, AND GROUNDING SYSTEM. COORDINATE INSTALLATION WITH PGE.

CAUTION: INSURE THAT NEUTRAL STRAP TO TRANSFORMER CASE IS REMOVED ON POWER TRANSFORMER.

NOTES:
1. SET VAULT LID 4 INCHES ABOVE FINAL GRADE: EXCAVATE 28-INCH DEEP HOLE FOR VAULT.
2. BACKFILL SHALL BE CONSISTENT WITH LOCAL SOIL CONDITIONS AND APPROVED BY PGE FIELD ENGINEER. MAXIMUM WEIGHT OF VAULT AND TRANSFORMER IS 4000 LBS.
3. COIL ONE LOOP OF EACH PRIMARY CABLE IN BOTTOM OF VAULT TO ALLOW SLACK FOR MOVEMENT OF CABLE. ALSO ALLOW SAME SLACK IN SECONDARY CABLES.
4. USE 2 FEET OF 4-INCH SCH. 40 PVC TO PROTECT PRIMARY AND SECONDARY CABLES WHERE THEY ENTER VAULT. INSTALL DUCT BETWEEN VAULTS AND ON OUTSIDE VAULTS AS DIRECTED BY PGE ENGINEER. INSTALL ONE DUCT FOR PRIMARY CABLE AND ONE DUCT FOR SECONDARY CABLES IN EACH POSITION.
5. BACKFILL BETWEEN VAULTS AND TAMP UNTIL FIRM.
6. GROUND WIRE AND TWO GROUND RODS TO BE INSTALLED AT LEAST 24 INCHES BELOW FINAL GRADE. LOOP GROUND WIRE INTO EACH VAULT AND FARGO TO ASBURY LOOP.

TRANSFORMER PAD AND CABLE VAULT

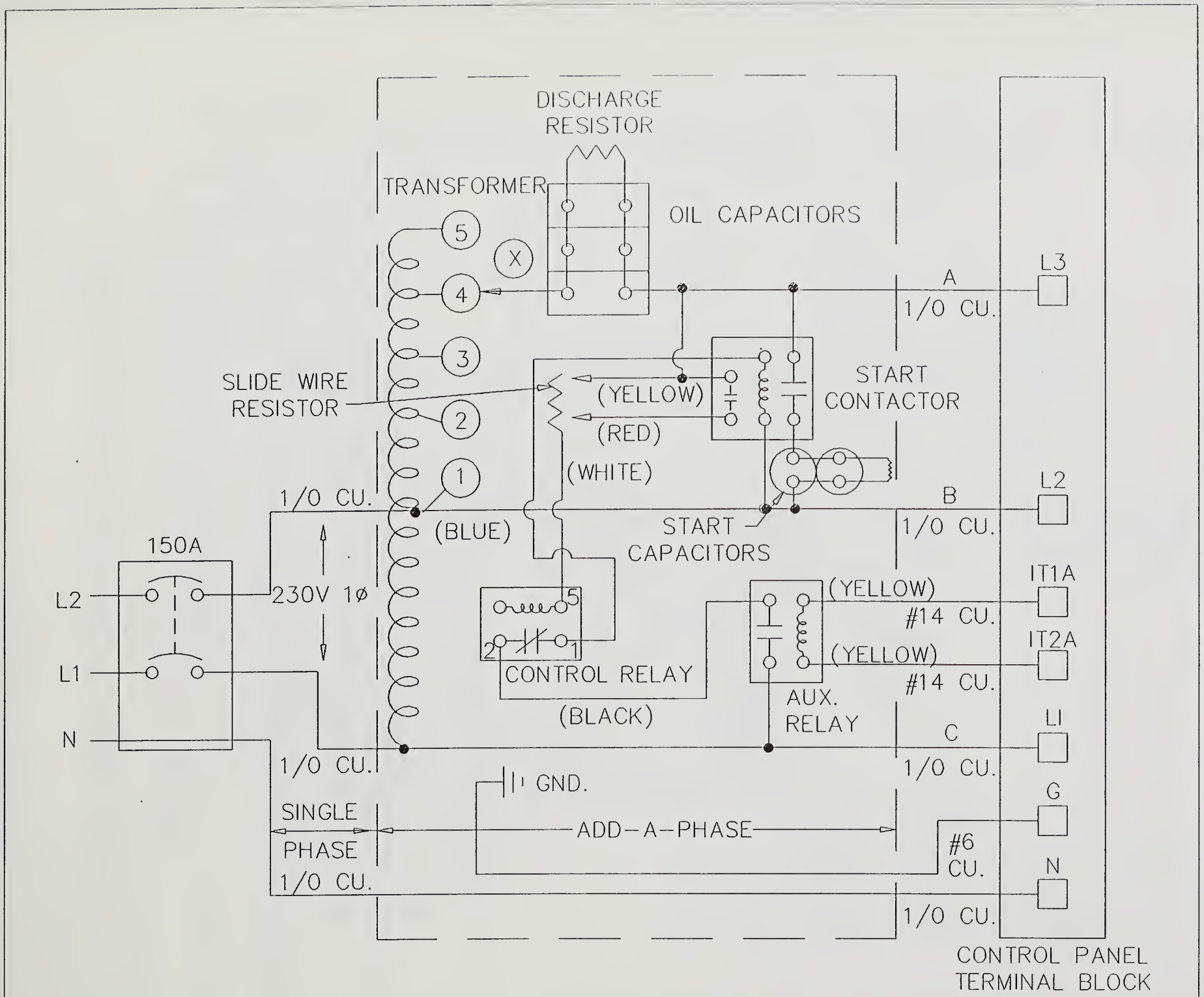
NO SCALE 3/2/88 ED000107



FIELD INSTALLED WATER SYSTEM CONTROL PANEL

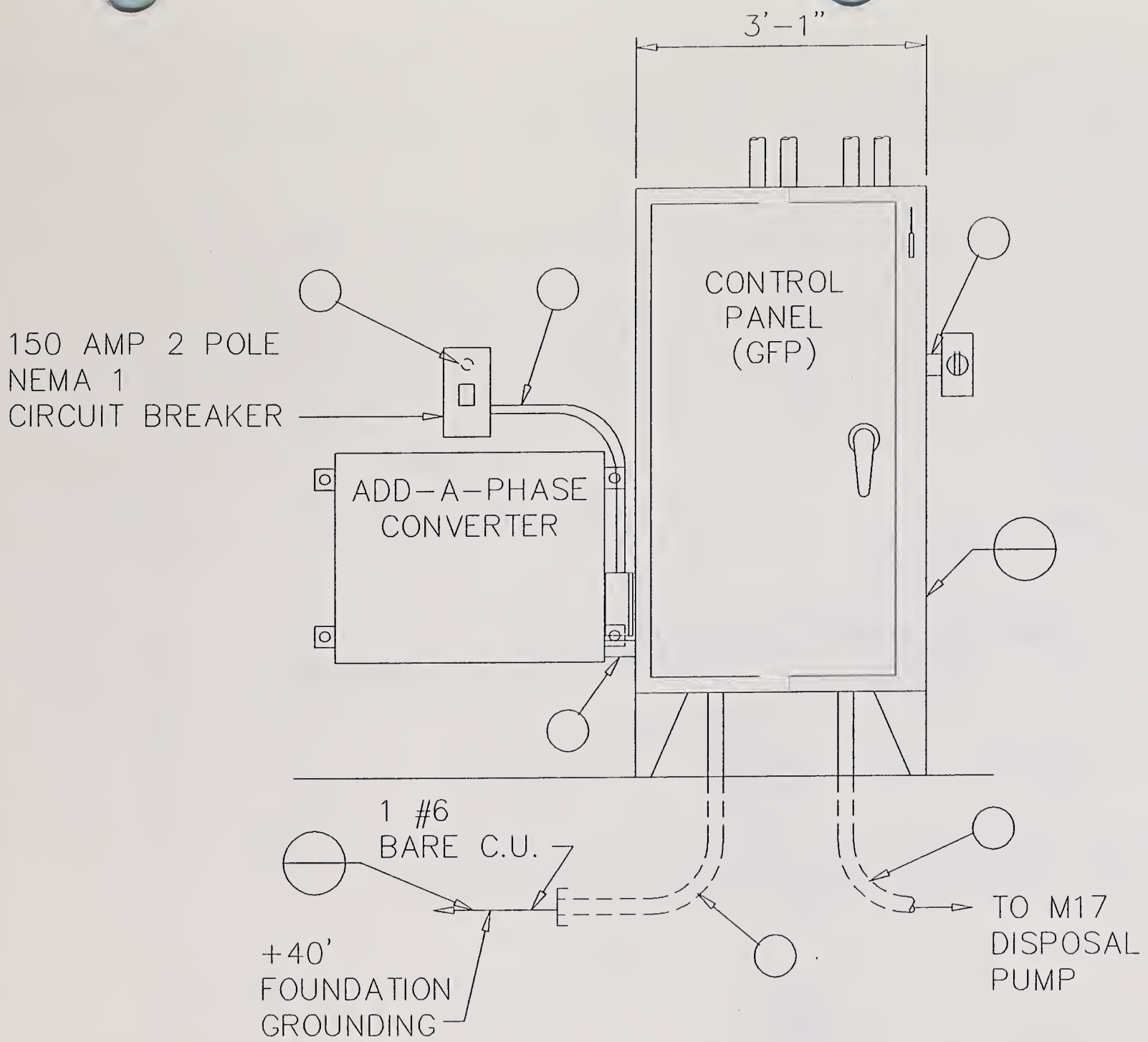
NO SCALE

3/2/88 ED000108



PHASE CONVERTER WIRING AND CONNECTIONS

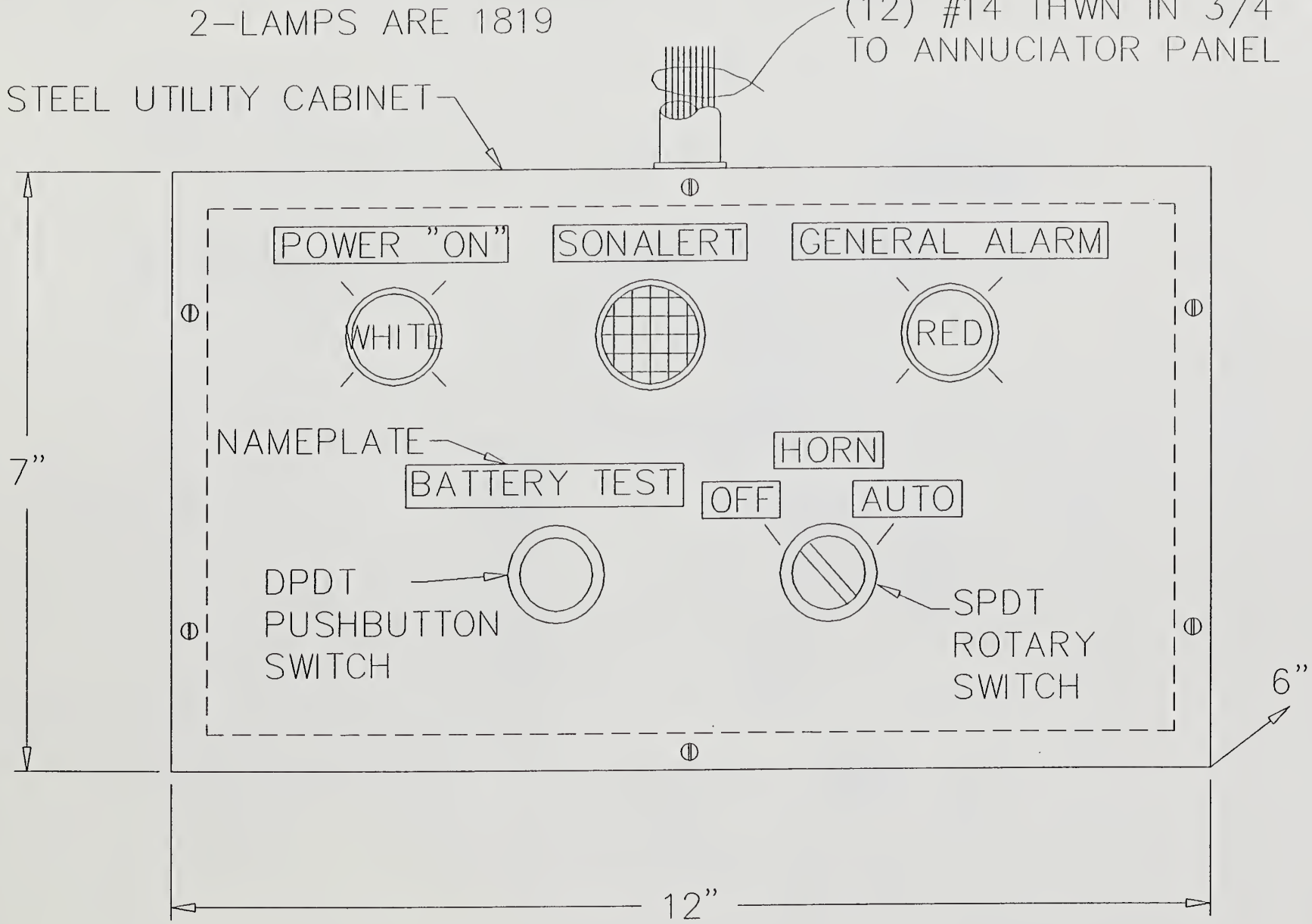
NO SCALE 3/2/88 ED000109



CONVERTER/CONTROL PANEL

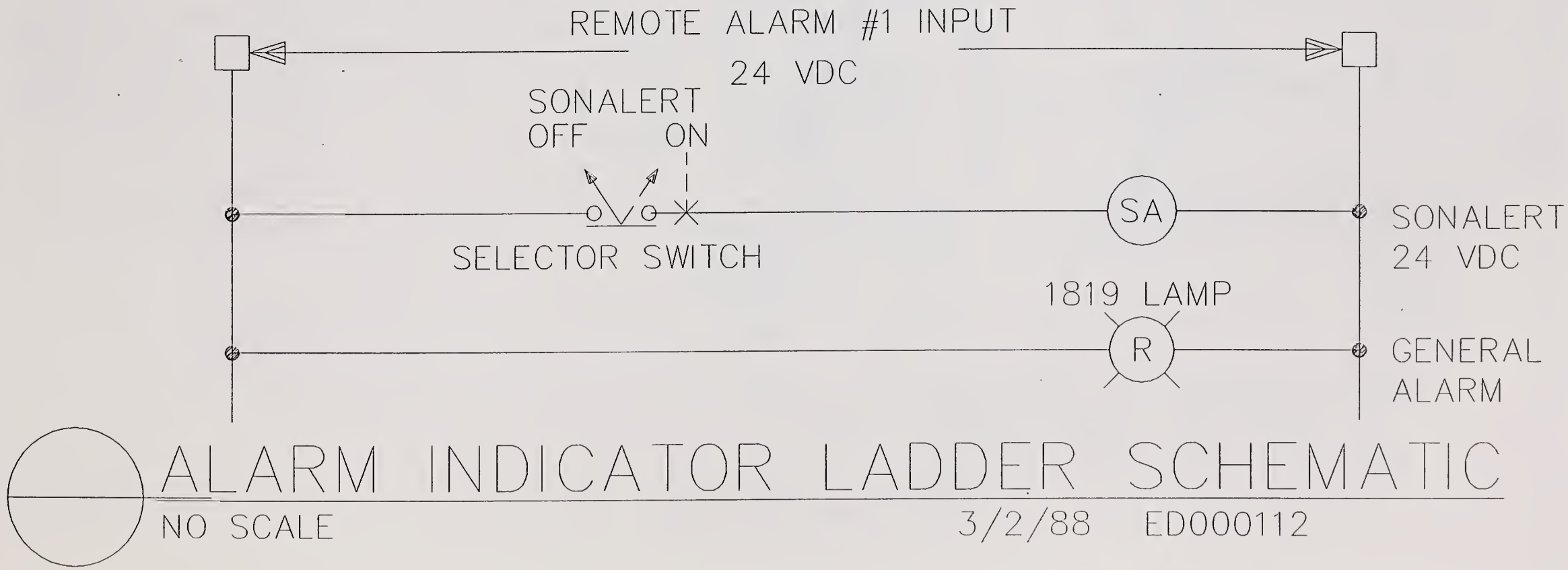
ELEVATION NO SCALE 3/2/88 ED000110

NOTE:
1—LIGHTS & SWITCHES
ARE OIL TIGHT
2—LAMPS ARE 1819



REMOTE ALARM INDICATOR PANEL

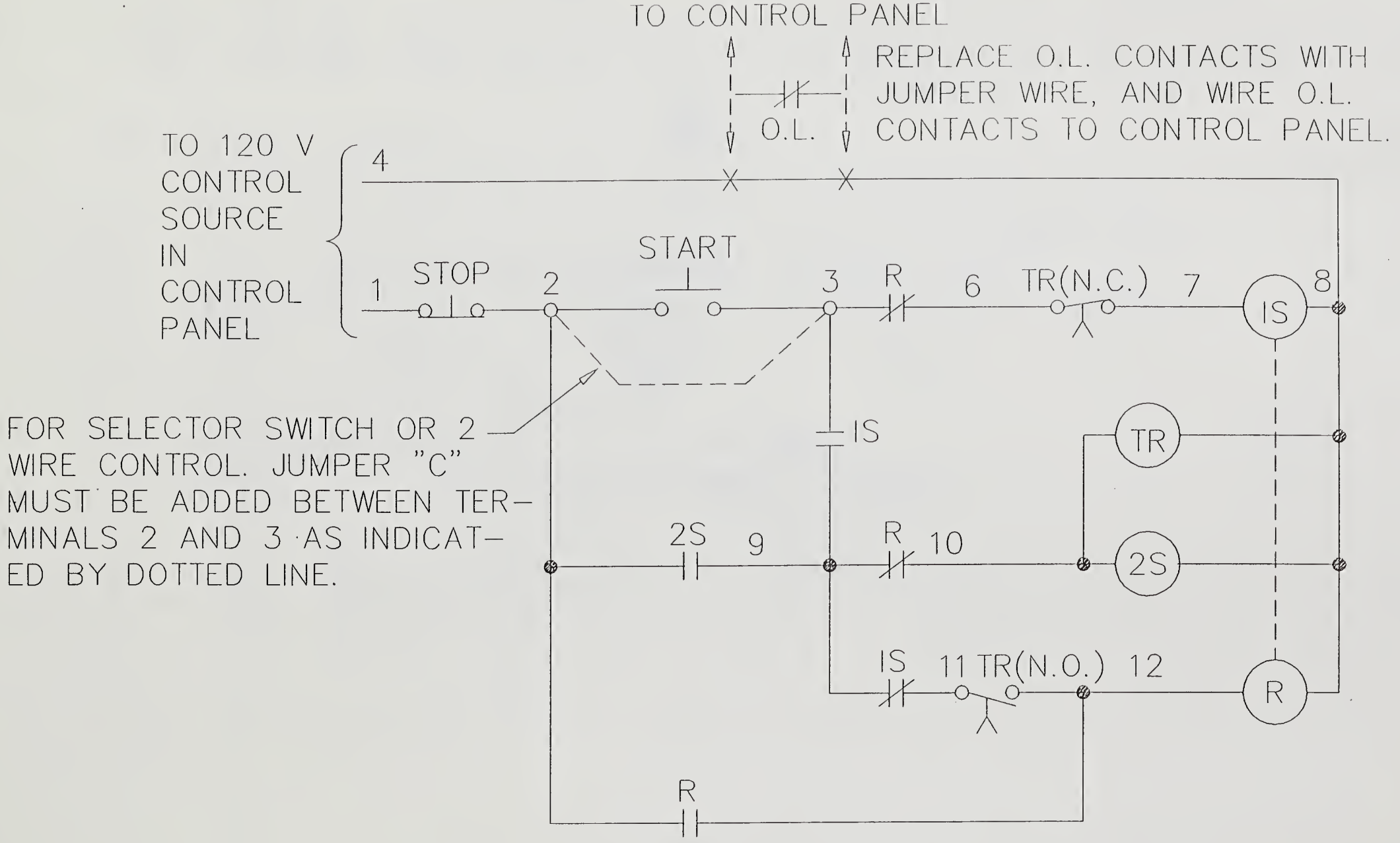
PANEL LAYOUT NO SCALE 3/2/88 ED000111



ALARM INDICATOR LADDER SCHEMATIC

NO SCALE

3/2/88 ED000112



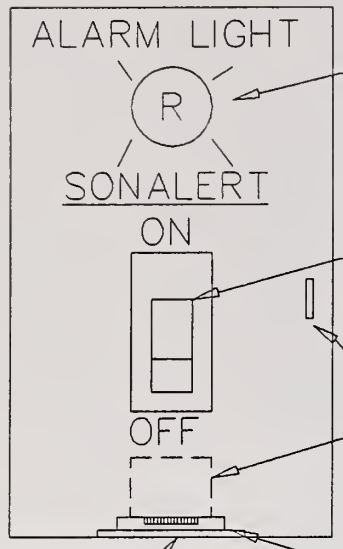
REDUCED VOLTAGE STARTER

3 PHASE AUTO TRANSFORMER SIZES 4-1/2 AND 5

NO SCALE

3/2/88 ED000113

FRONT



1819 LAMP (OILTIGHT)

RED LENS

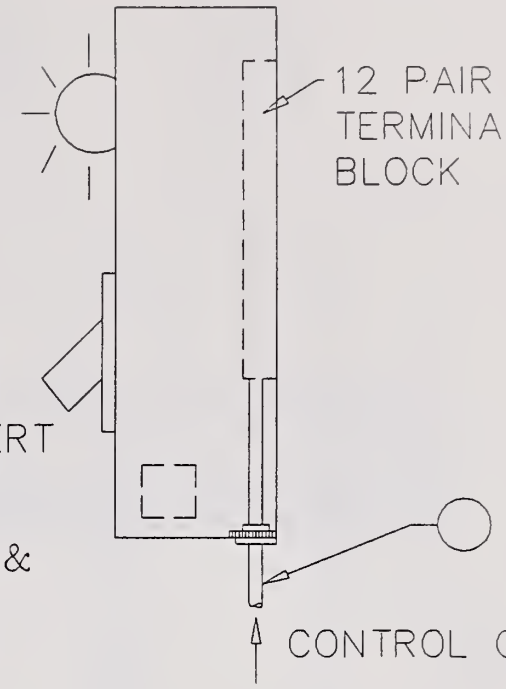
W.P. SWITCH

PADLOCK HASP

24 VDC SONALERT INSIDE

METAL SCREEN & MTG. BRACKET

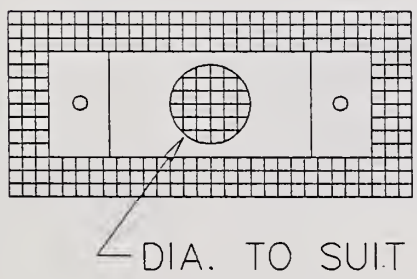
SIDE

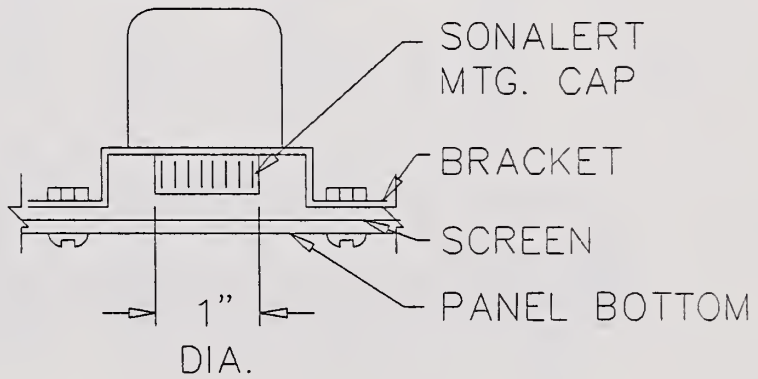


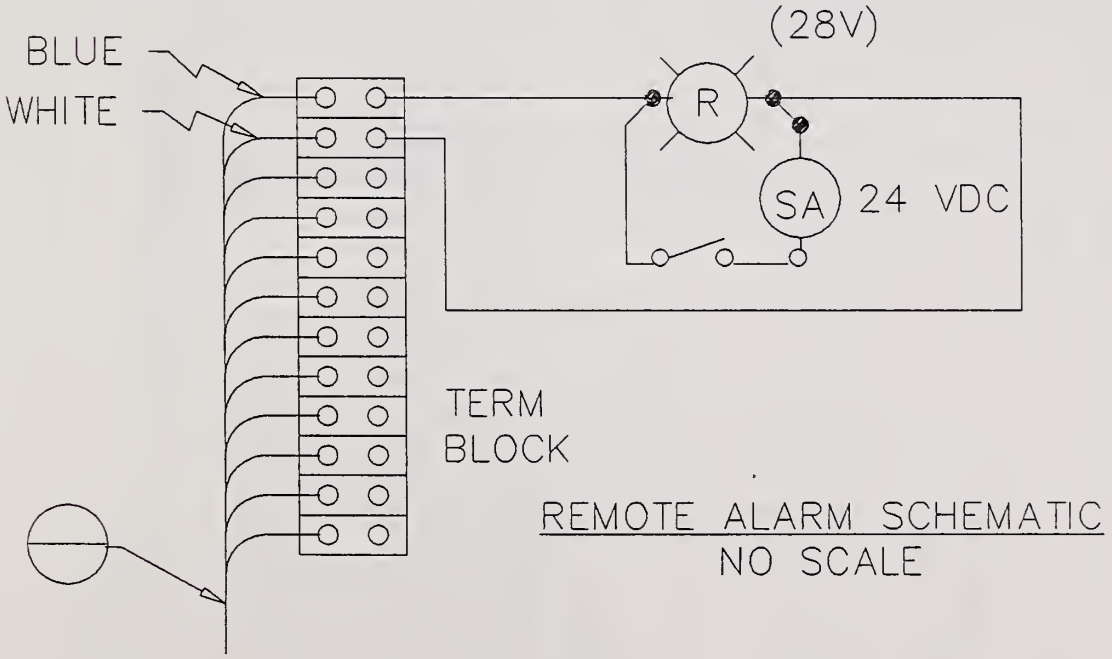
12 PAIR TERMINAL BLOCK

CONTROL CABLE

MTG. BRACKET AND SCREEN DETAIL





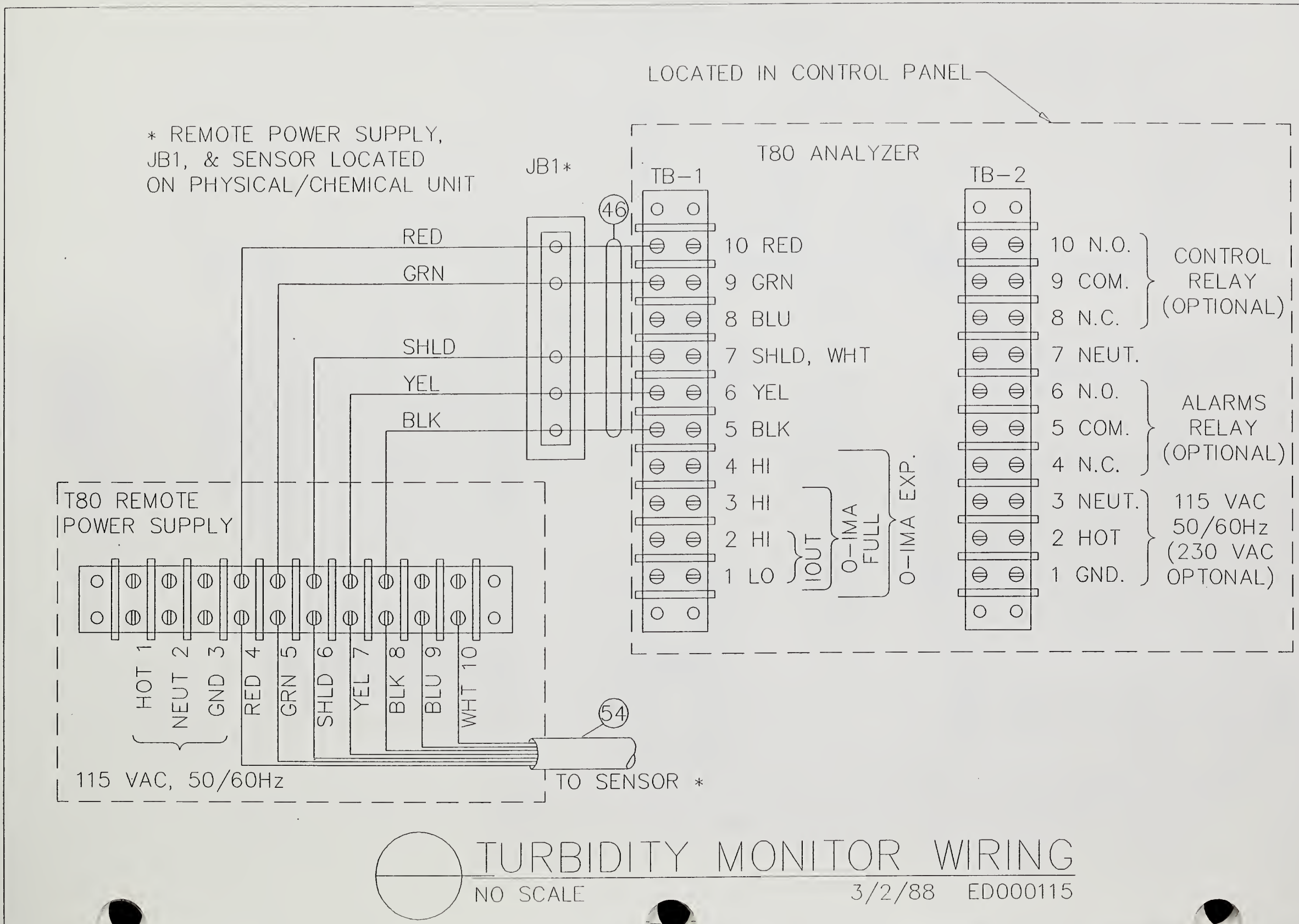


REMOTE ALARM SCHEMATIC
NO SCALE

ALARM PANEL

NO SCALE

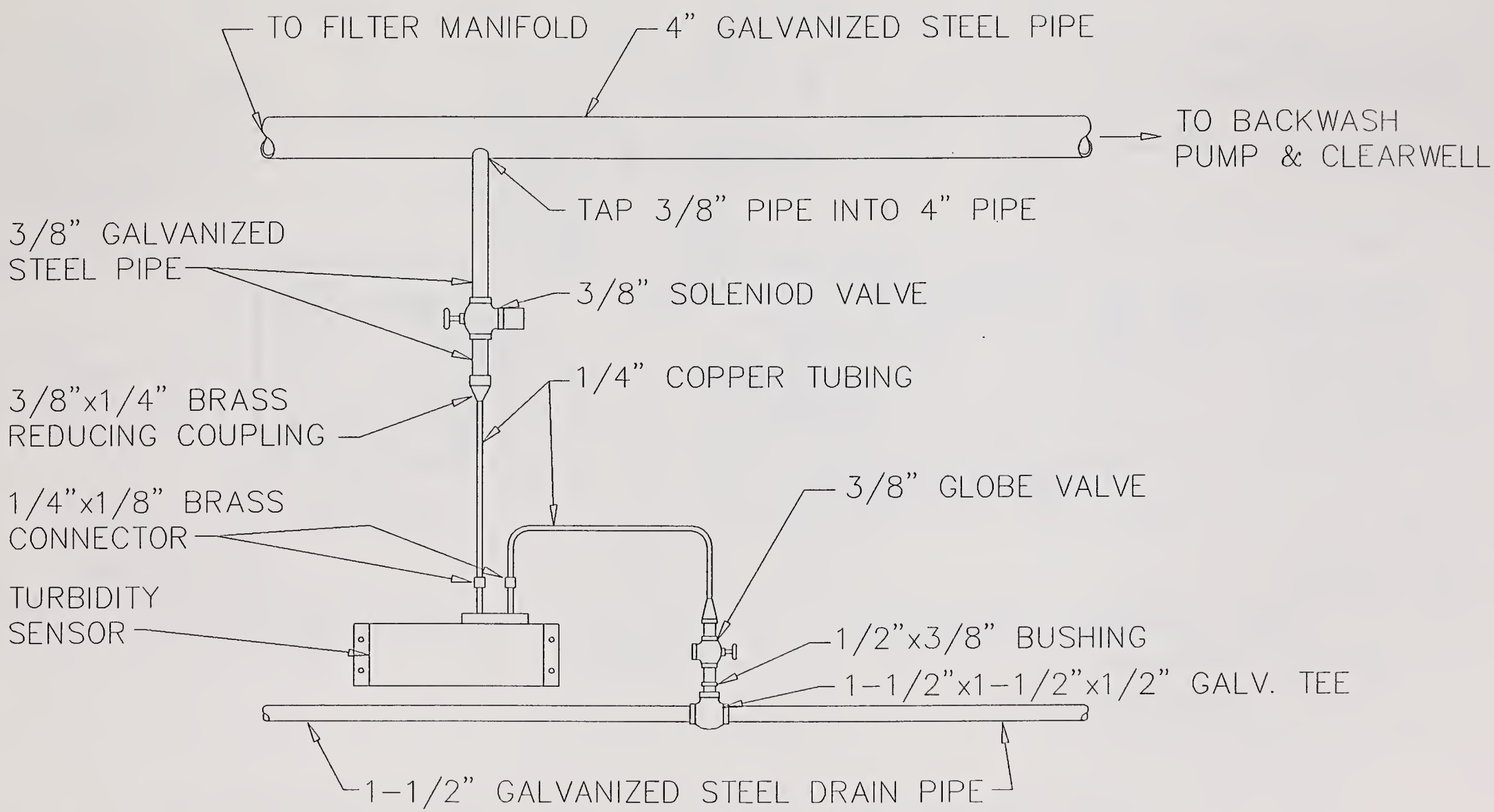
ED000114
3/2/88



TURBIDITY MONITOR WIRING

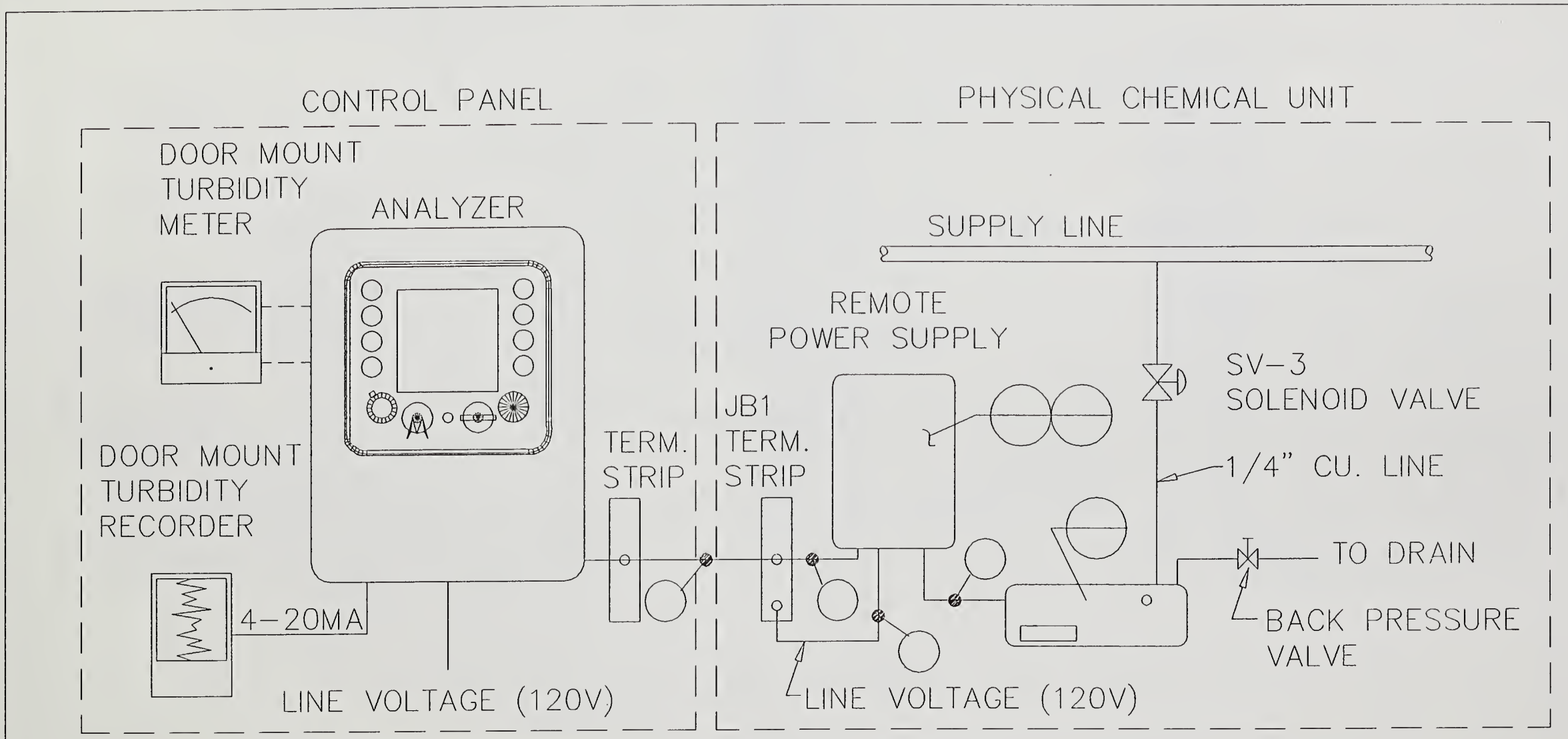
NO SCALE

3/2/88 ED000115



TURBIDITY SENSOR PIPING DETAIL

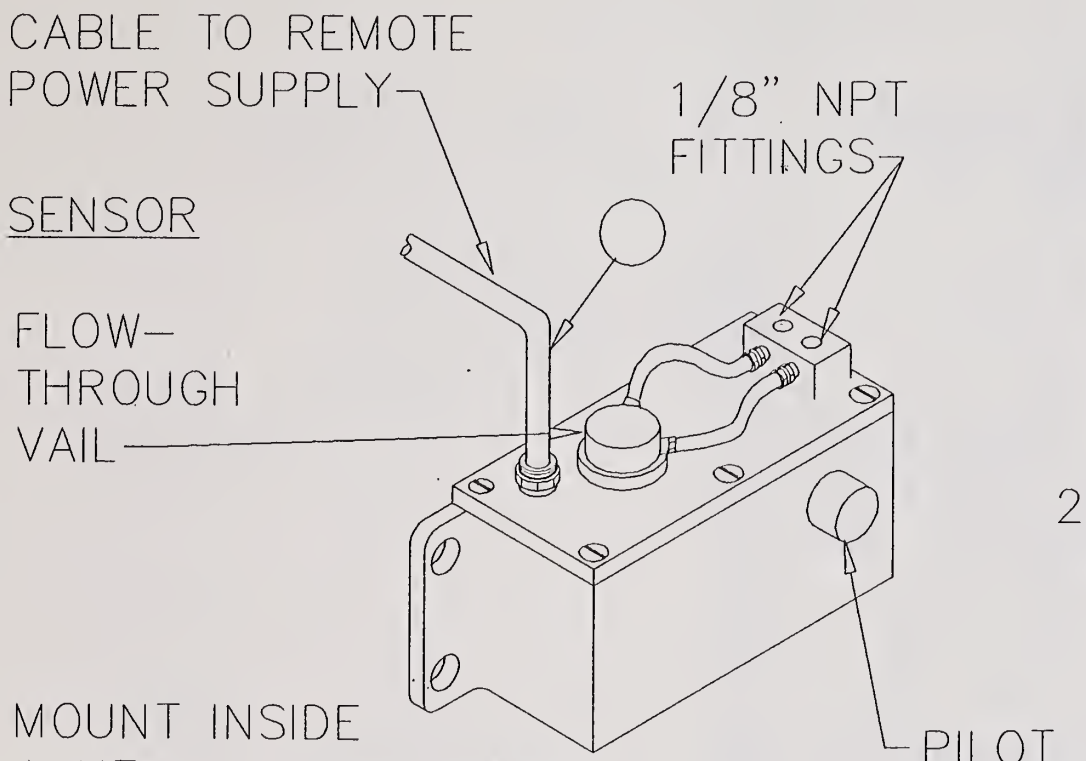
NO SCALE 3/2/88 ED000116

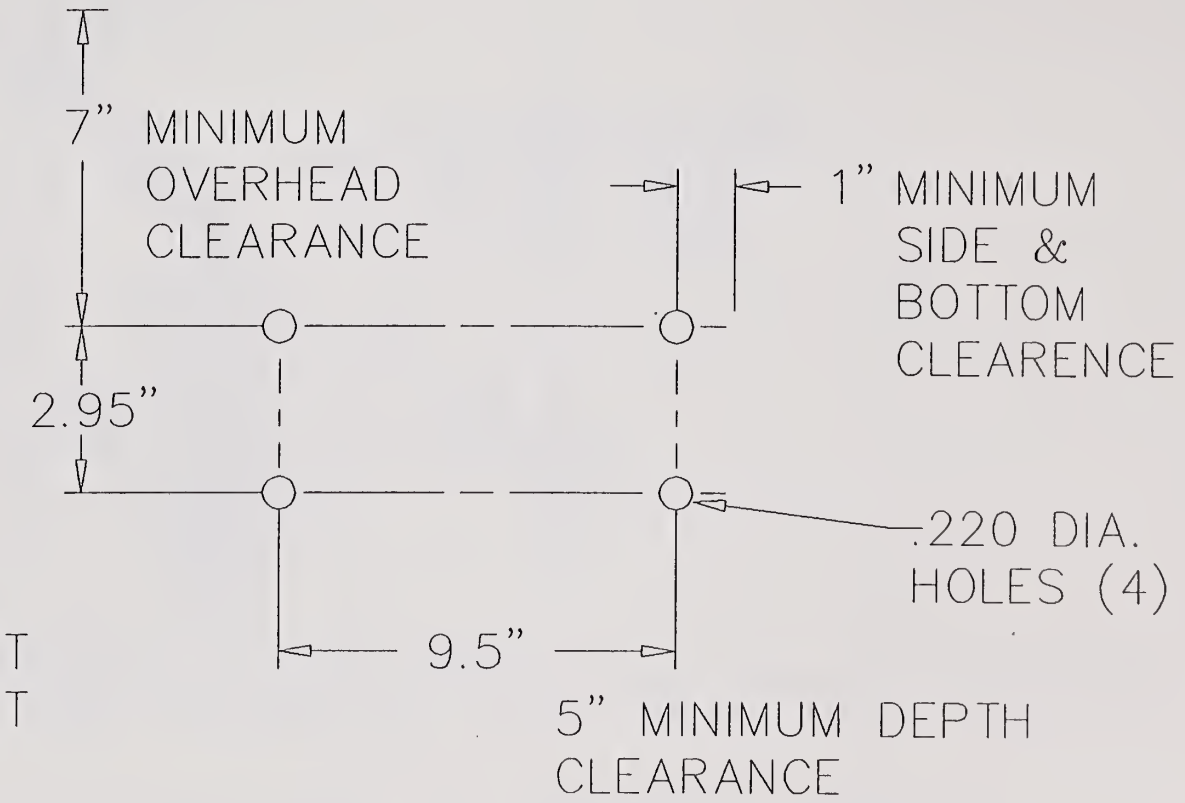


TURBIDITY MONITOR CONNECTIONS

NO SCALE

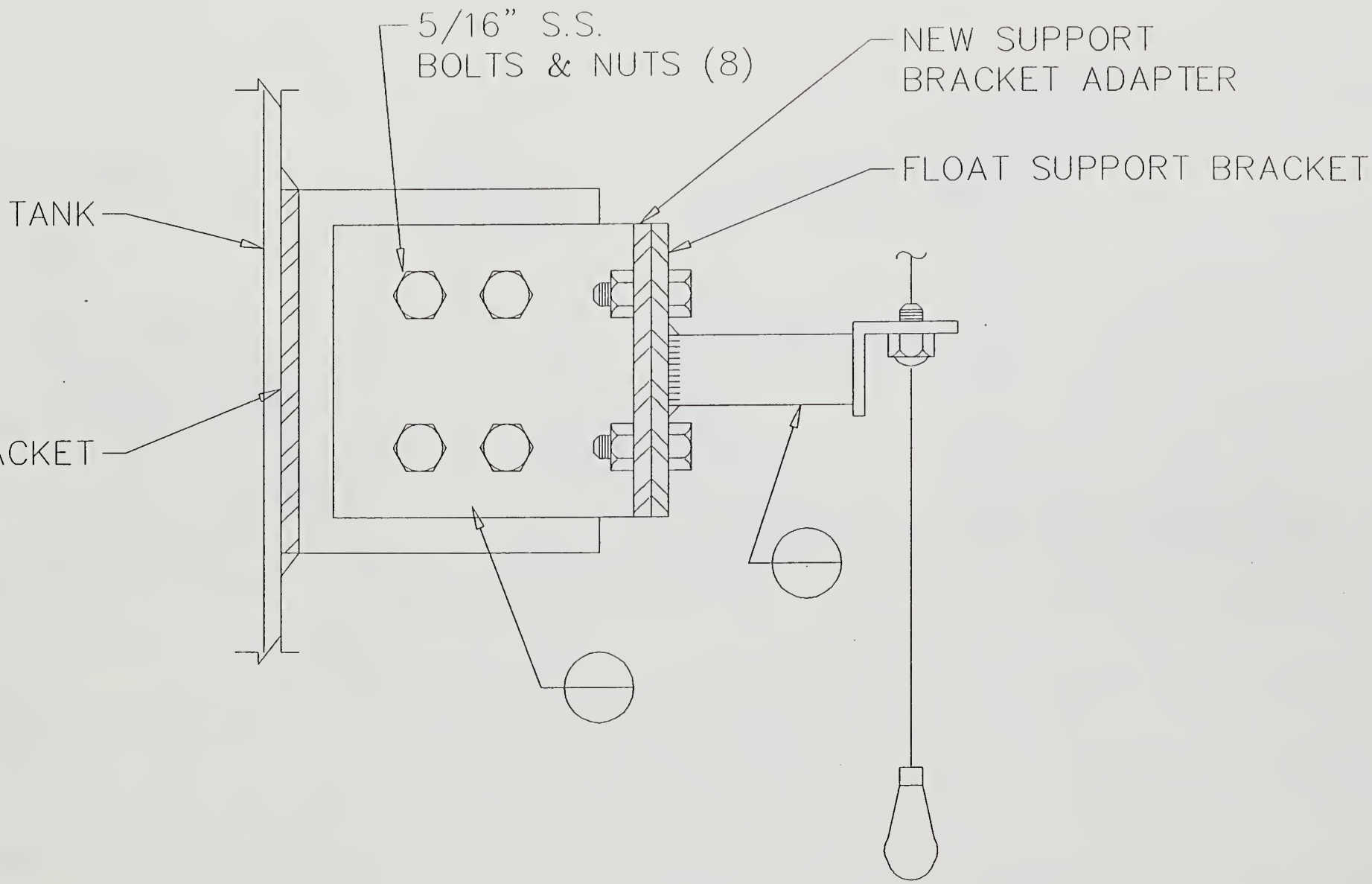
3/2/88 ED000117





TURBIDITY SENSOR MOUNTING

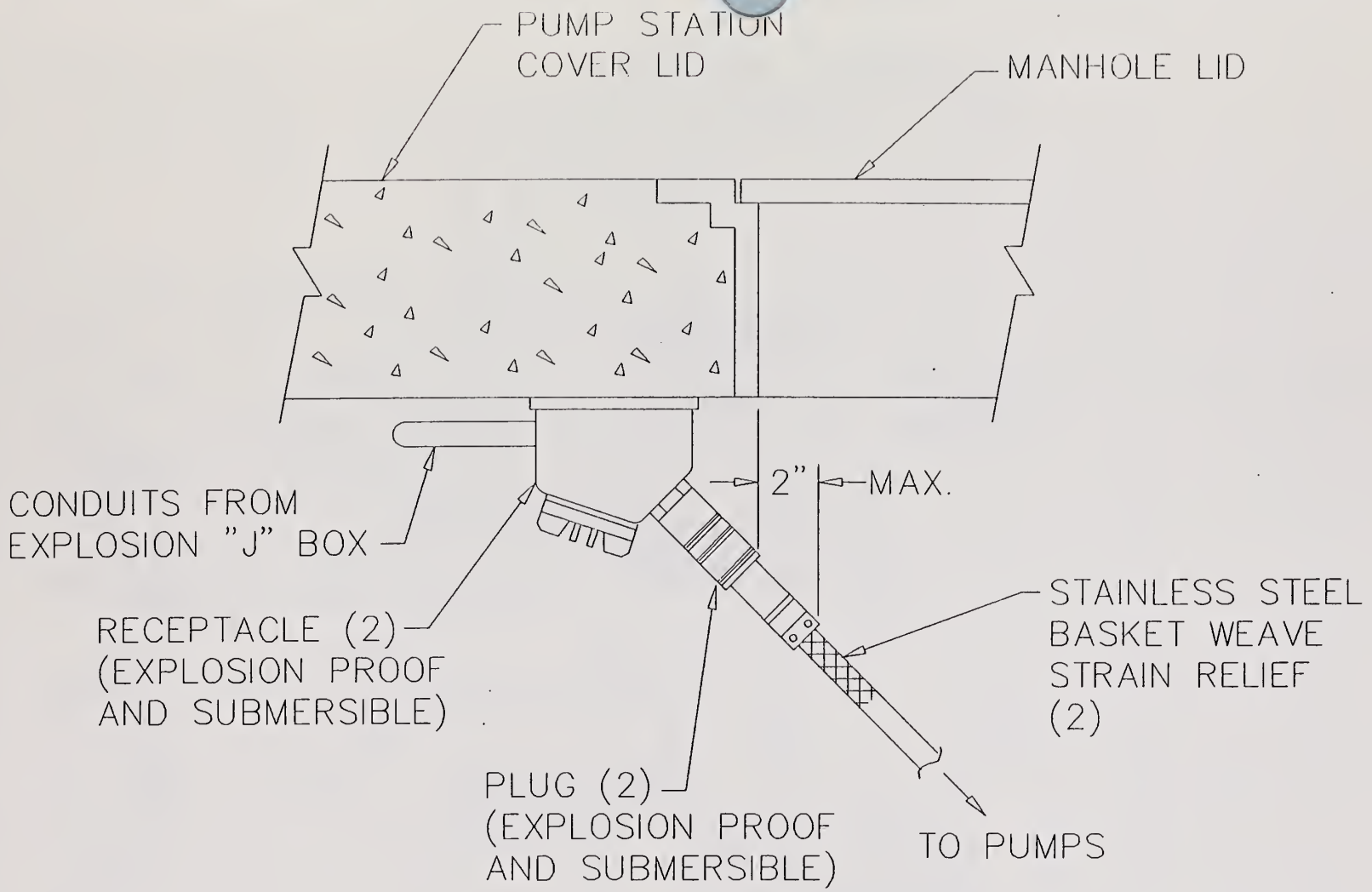
NO SCALE 3/2/88 ED000118



SUPPORT BRACKET/ADAPTER ASSY.

NO SCALE

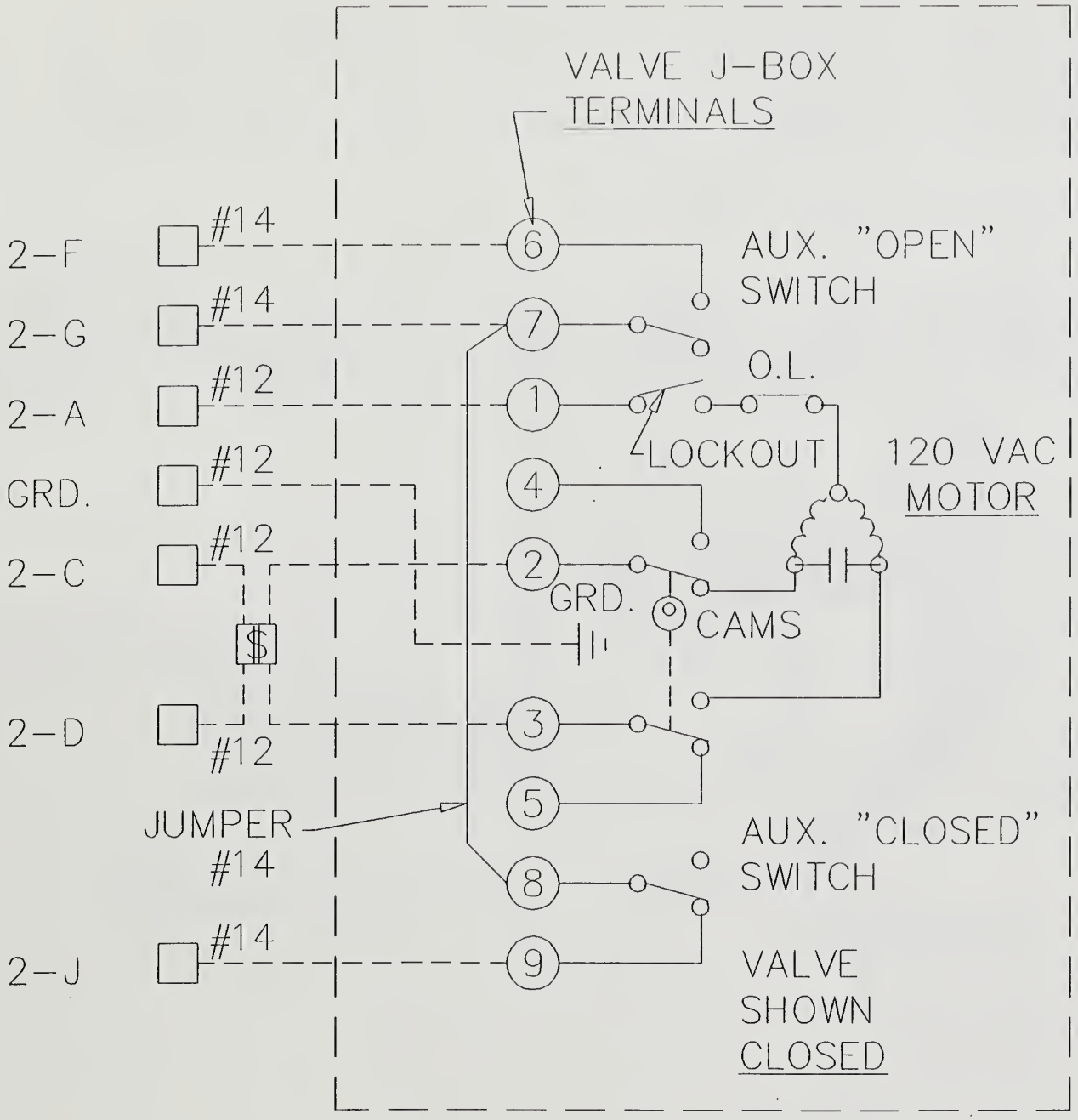
3/2/88 ED000119



NOTE:
SECURE RECEEPTACLE TO PUMP STATION COVER LID W/(4) 5/16ø BOLTS– (USE CONCRETE ANCHOR W/MIN. 2,000 POUNDS PULL–OUT STRENGTH).

EXPLOSION PROOF AND SUBMERSIBLE PLUG AND RECEPTACLE DETAIL

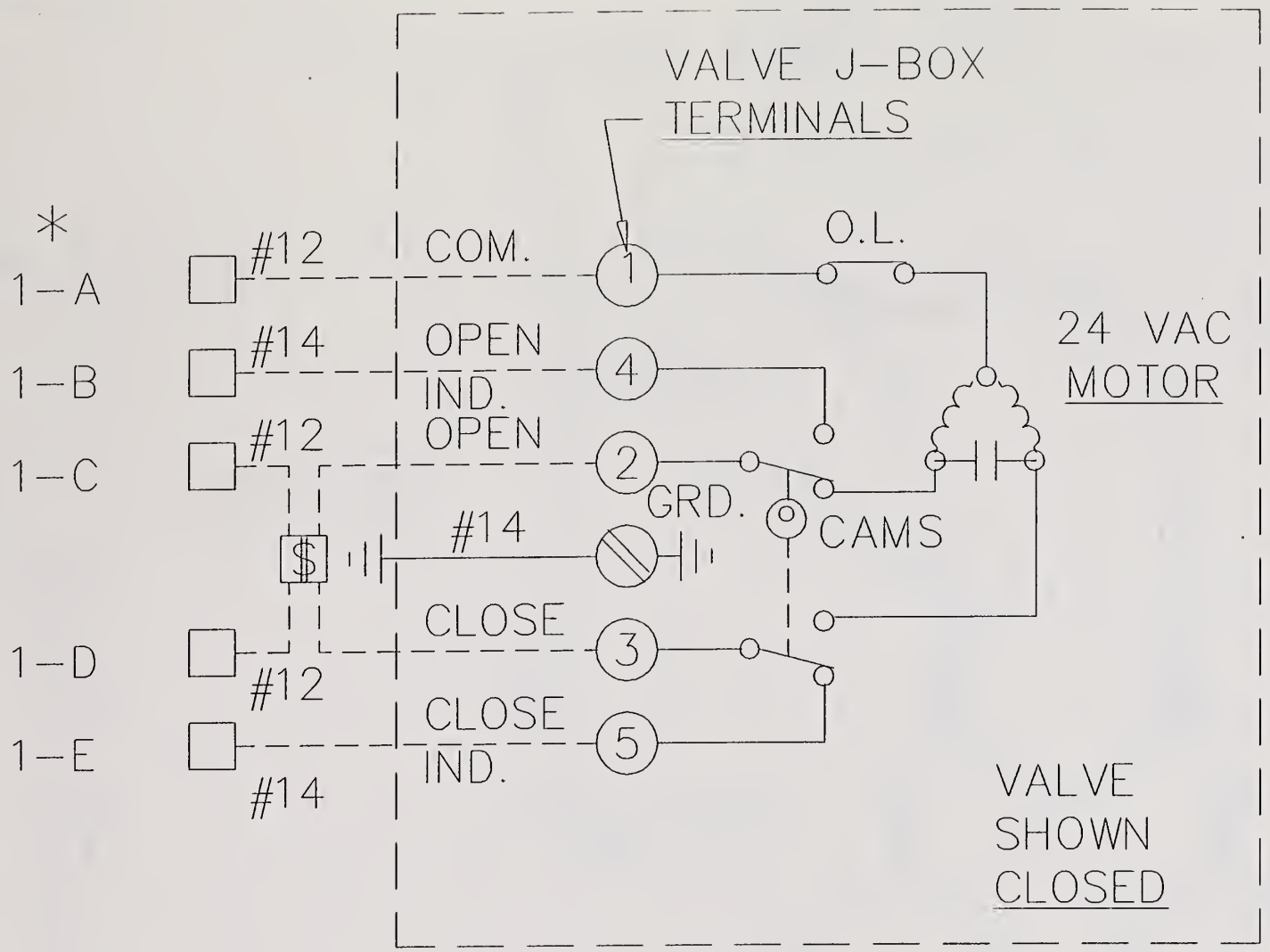
NO SCALE 3/2/88 ED000121



EV-2

VALVE WIRING DIAGRAM

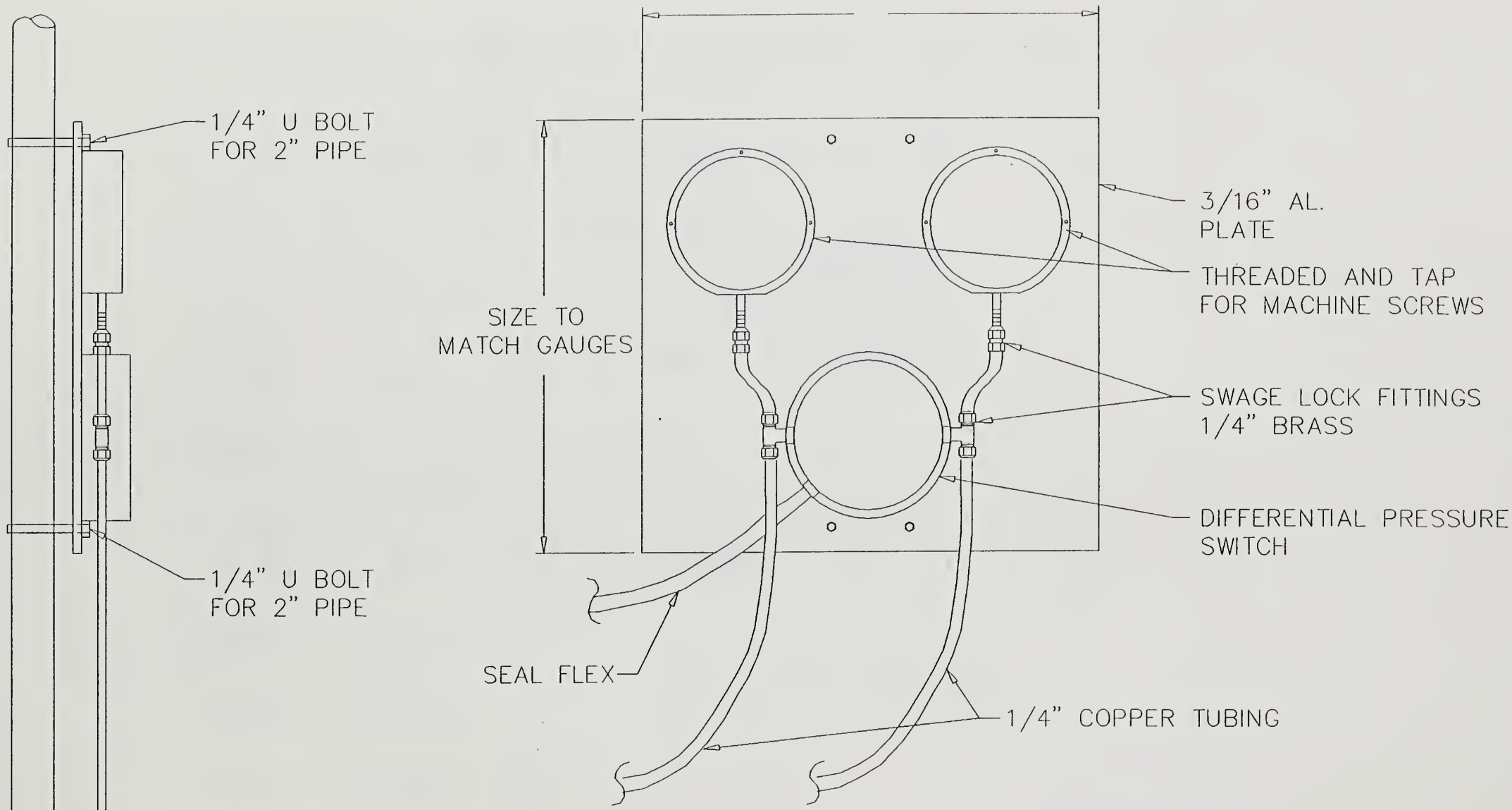
NO SCALE 3/2/88 ED000122



* 1–A FOR EV–1, 4–A FOR EV–4, ETC.

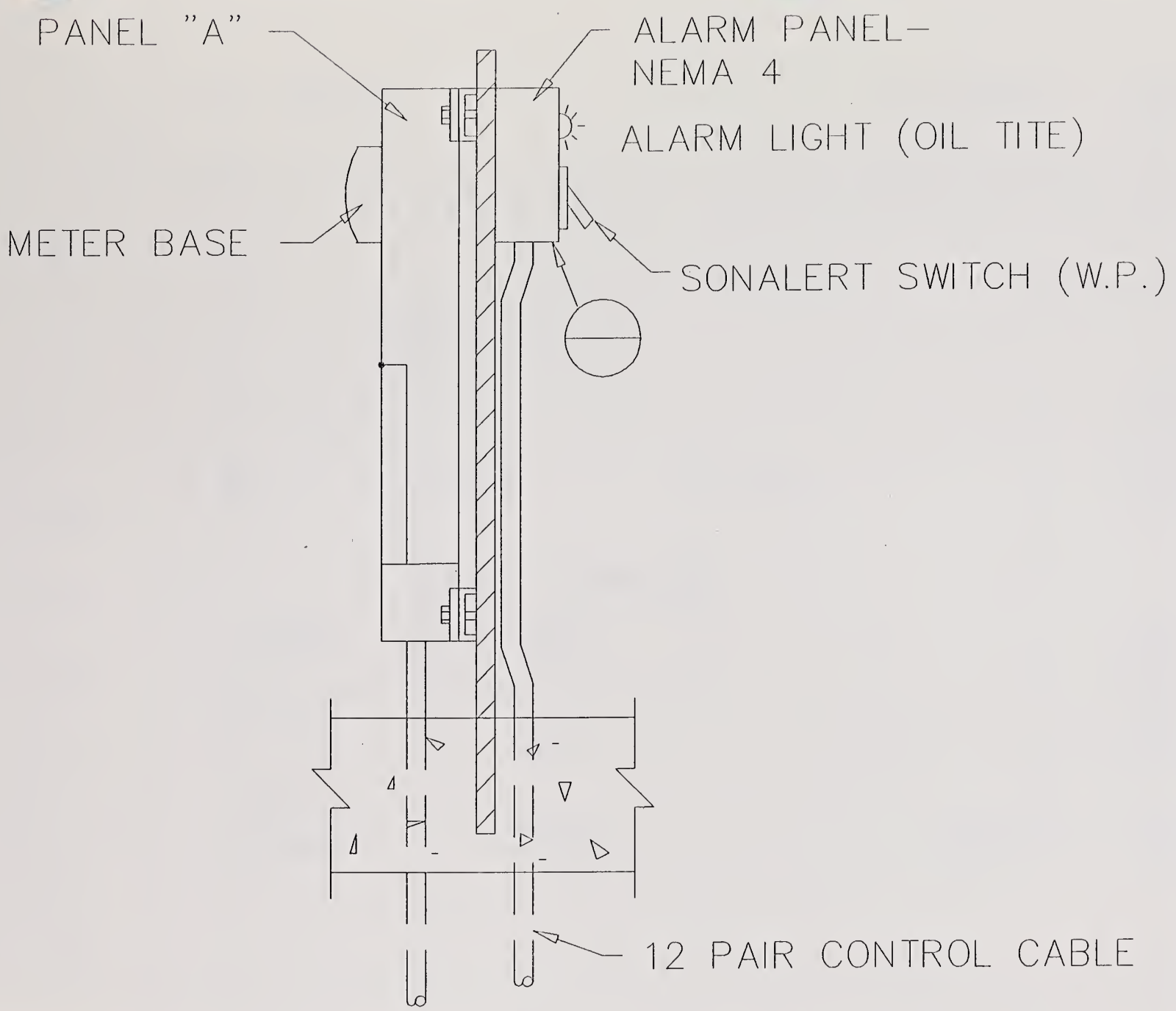
EV–1, EV–4, EV–5, EV–6, EV–7
VALVE WIRING DIAGRAM

NO SCALE 3/2/88 ED000123



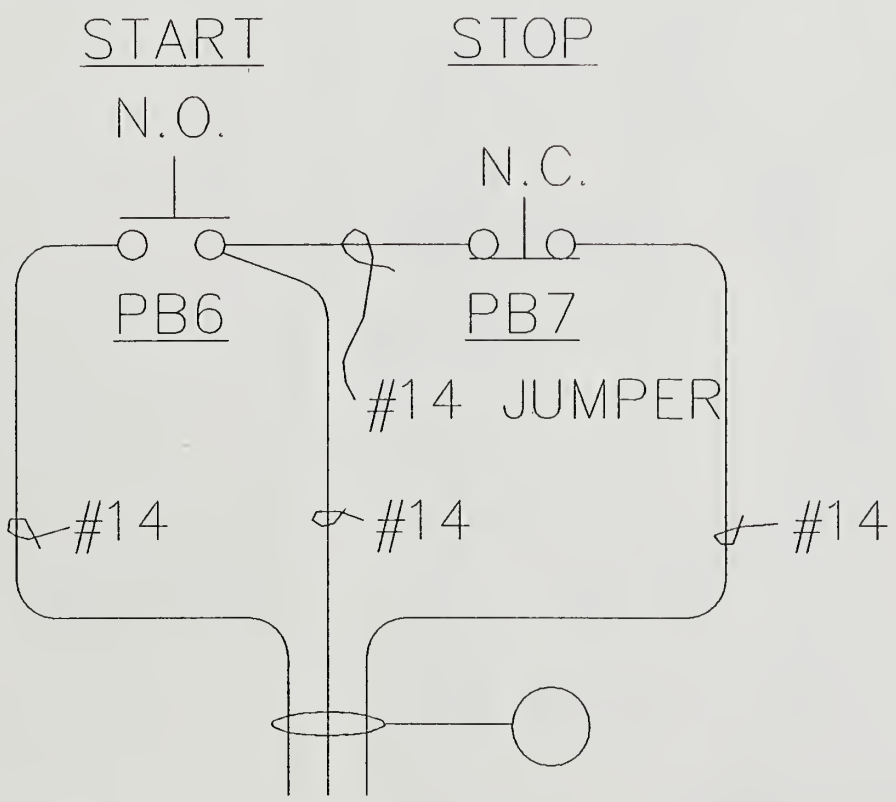
DIFFERENTIAL PRESSURE SWITCH

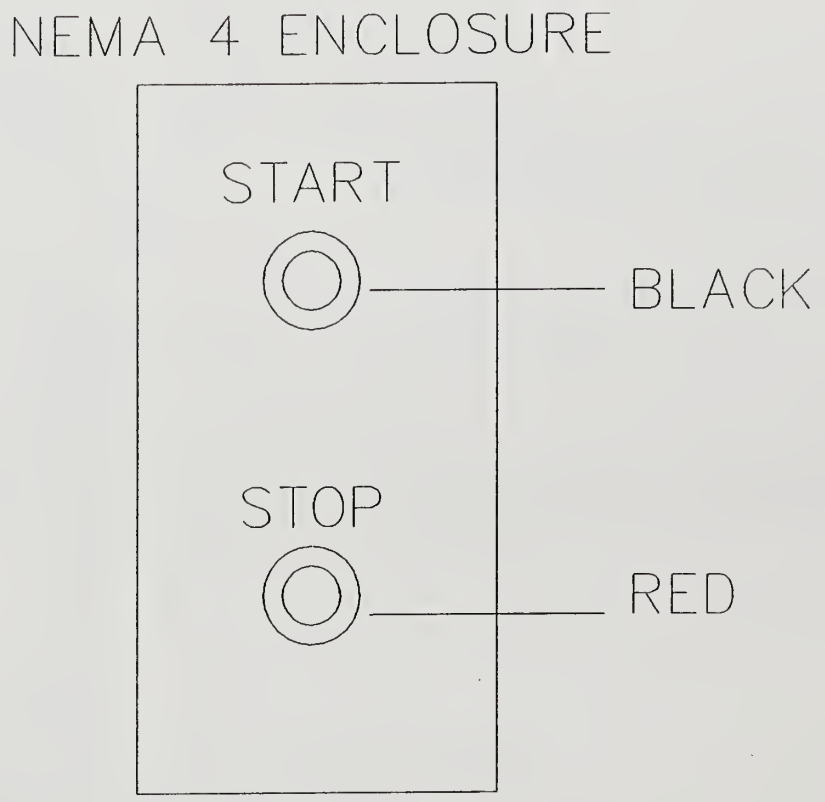
DETAIL NO SCALE 3/2/88 ED000124



HOST TRAILER POWER PEDESTAL–SIDE VIEW

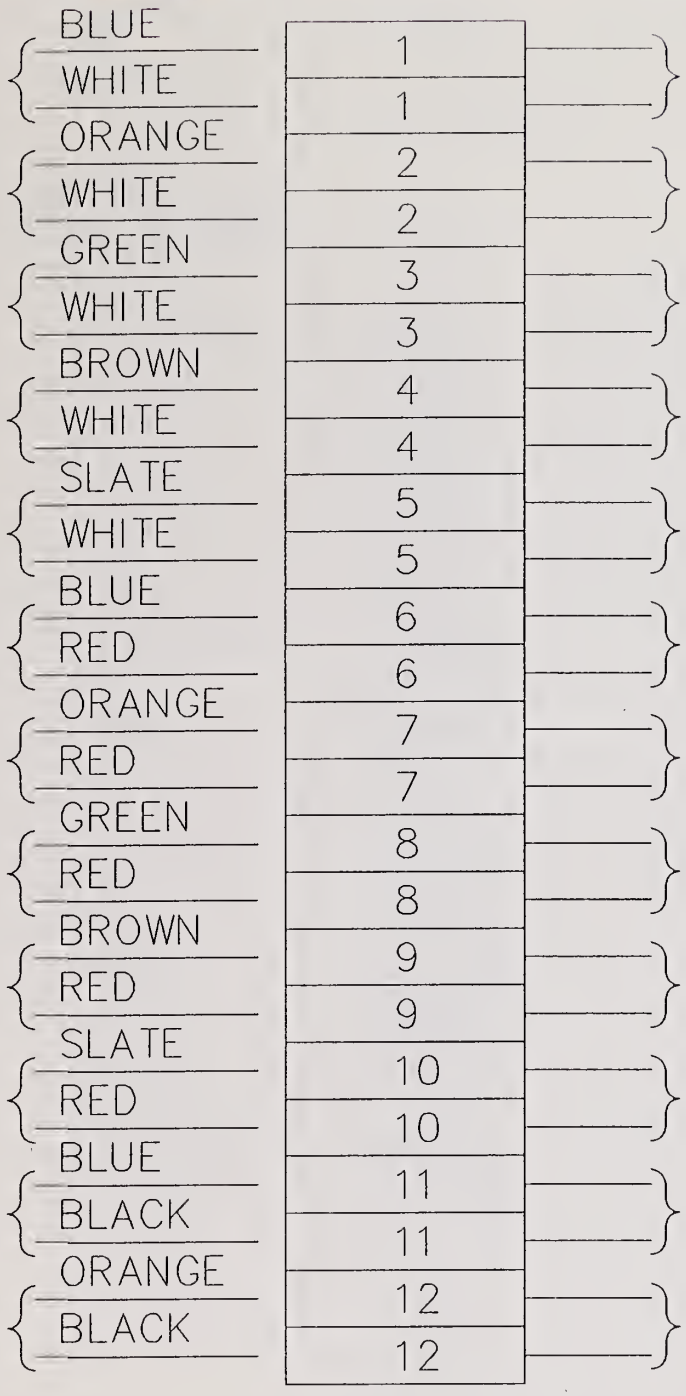
NO SCALE 3/2/88 ED000126





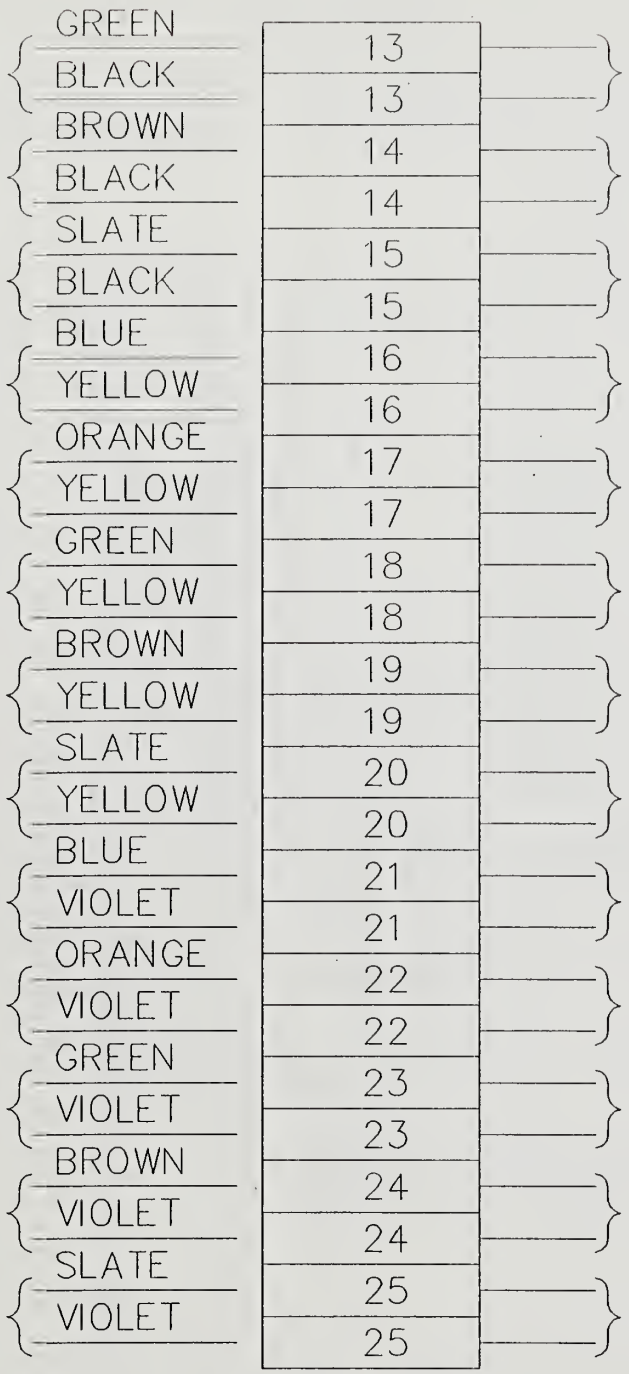
BACKWASH PUSHBUTTON WIRING

NO SCALE 3/2/88 ED000128



CONTROL CABLE TERMINAL BLOCK CONNECTIONS

3/2/88 ED000129



BLUE & WHITE
BINDER STRING

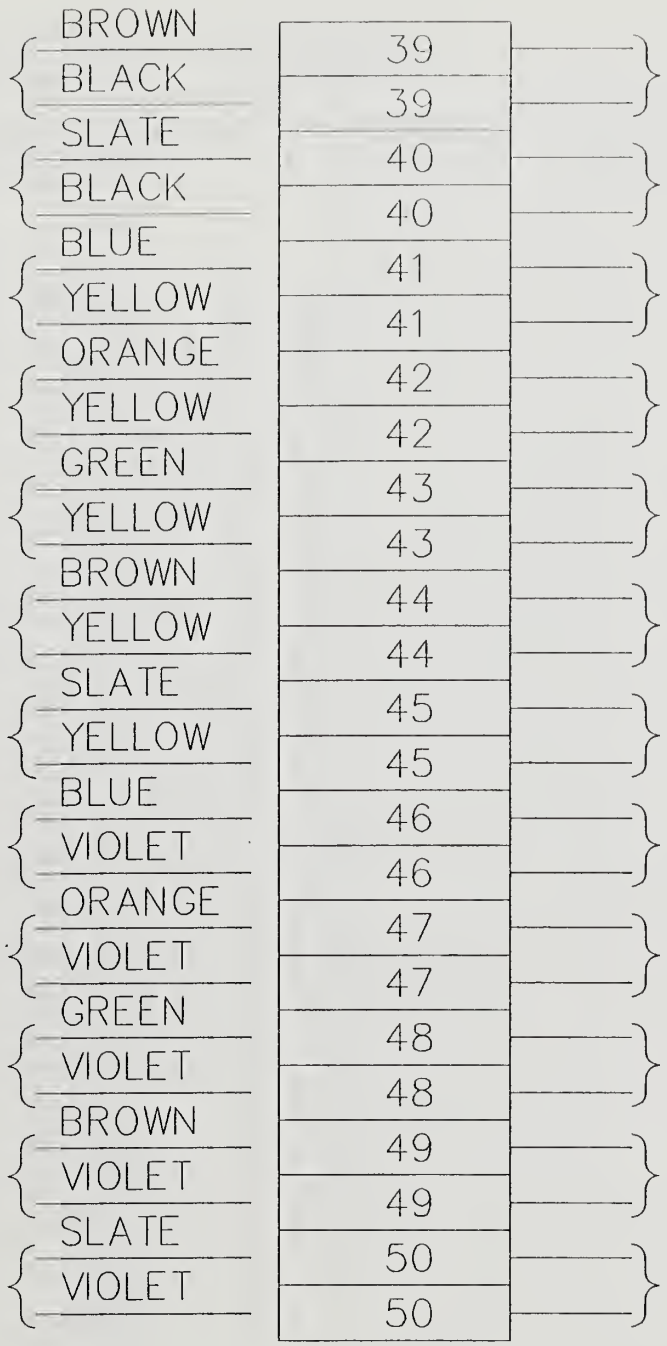
CONTROL CABLE TERMINAL BLOCK CONNECTIONS

3/2/88 ED000130

BLUE / WHITE	26	26
ORANGE / WHITE	27	27
GREEN / WHITE	28	28
BROWN / WHITE	29	29
SLATE / WHITE	30	30
BLUE / RED	31	31
ORANGE / RED	32	32
GREEN / RED	33	33
BROWN / RED	34	34
SLATE / RED	35	35
BLUE / BLACK	36	36
ORANGE / BLACK	37	37
GREEN / BLACK	38	38

CONTROL CABLE TERMINAL BLOCK CONNECTIONS

3/2/88 ED000131



ORANGE & WHITE
BINDER STRING

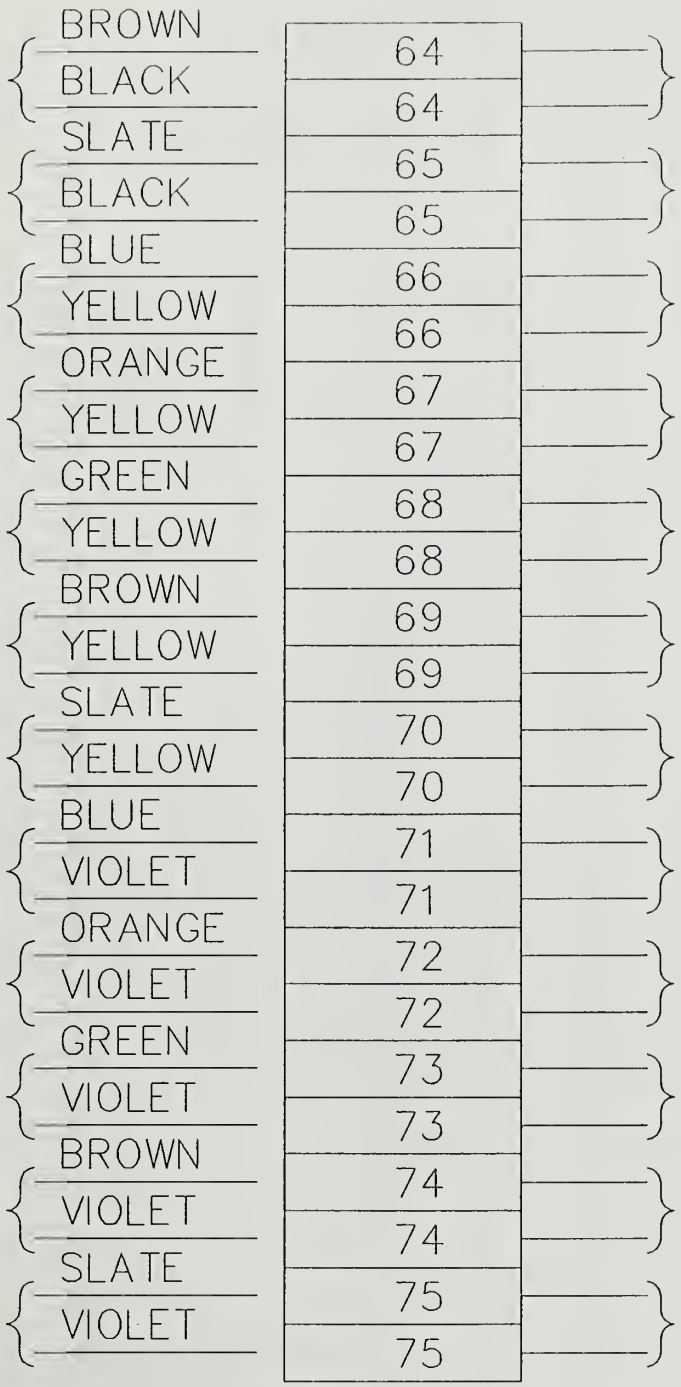
CONTROL CABLE TERMINAL BLOCK CONNECTIONS

3/2/88 ED000132

BLUE / WHITE	51	51
ORANGE / WHITE	52	52
GREEN / WHITE	53	53
BROWN / WHITE	54	54
SLATE / WHITE	55	55
BLUE / RED	56	56
ORANGE / RED	57	57
GREEN / RED	58	58
BROWN / RED	59	59
SLATE / RED	60	60
BLUE / BLACK	61	61
ORANGE / BLACK	62	62
GREEN / BLACK	63	63

CONTROL CABLE TERMINAL BLOCK CONNECTIONS

3/2/88 ED000133



CONTROL CABLE TERMINAL BLOCK CONNECTIONS

3/2/88 ED000134

CONNECTIONS

3/2/88 ED000134

BLUE / WHITE	76	
	76	
ORANGE / WHITE	77	
	77	
GREEN / WHITE	78	
	78	
BROWN / WHITE	79	
	79	
SLATE / WHITE	80	
	80	
BLUE / RED	81	
	81	
ORANGE / RED	82	
	82	
GREEN / RED	83	
	83	
BROWN / RED	84	
	84	
SLATE / RED	85	
	85	
BLUE / BLACK	86	
	86	

CONTROL CABLE TERMINAL BLOCK CONNECTIONS

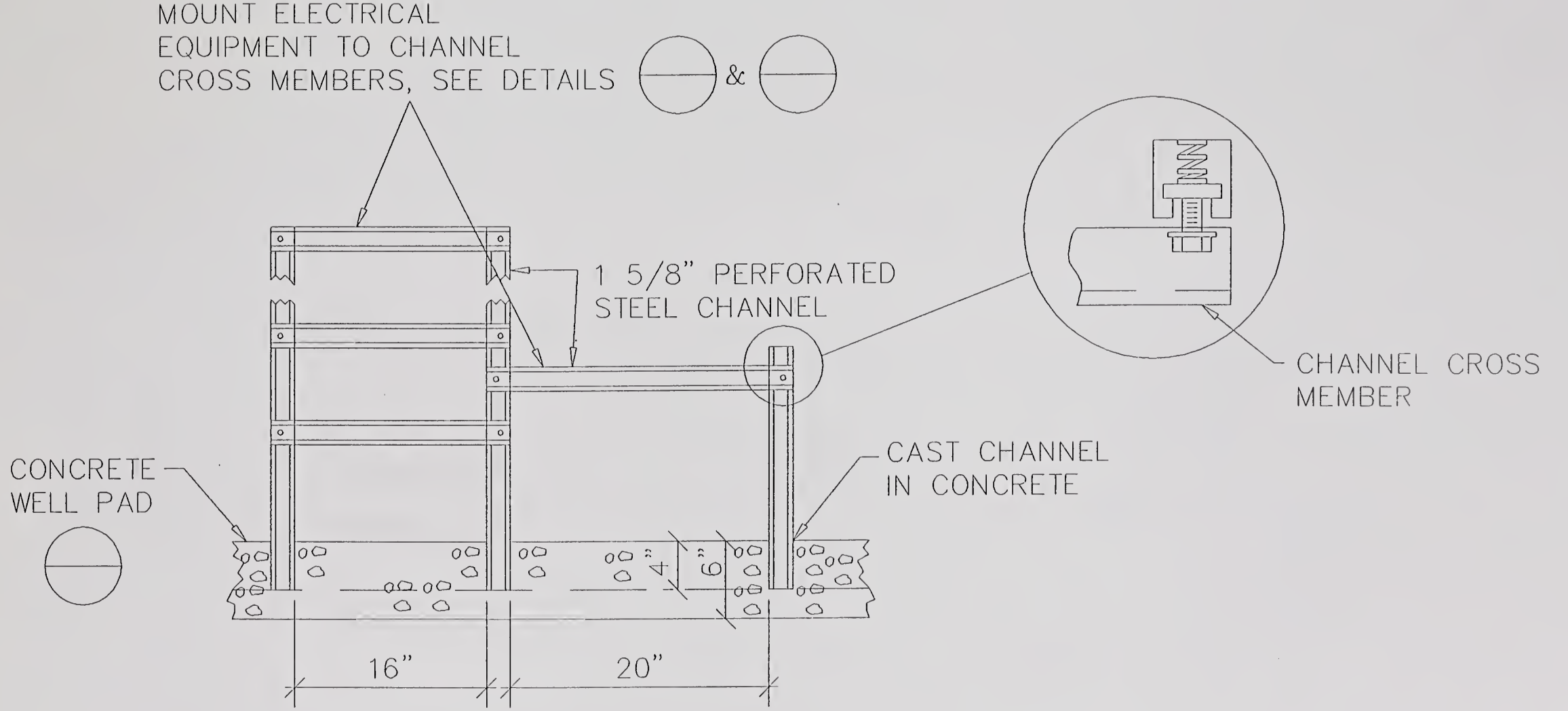
3/2/88 ED000135

ORANGE	87
BLACK	87
GREEN	88
BLACK	88
BROWN	89
BLACK	89
SLATE	90
BLACK	90
BLUE	91
YELLOW	91
ORANGE	92
YELLOW	92
GREEN	93
YELLOW	93
BROWN	94
YELLOW	94
SLATE	95
YELLOW	95
BLUE	96
VIOLET	96
ORANGE	97
VIOLET	97
GREEN	98
VIOLET	98
BROWN	99
VIOLET	99
SLATE	100
VIOLET	100

CONTROL CABLE TERMINAL BLOCK CONNECTIONS

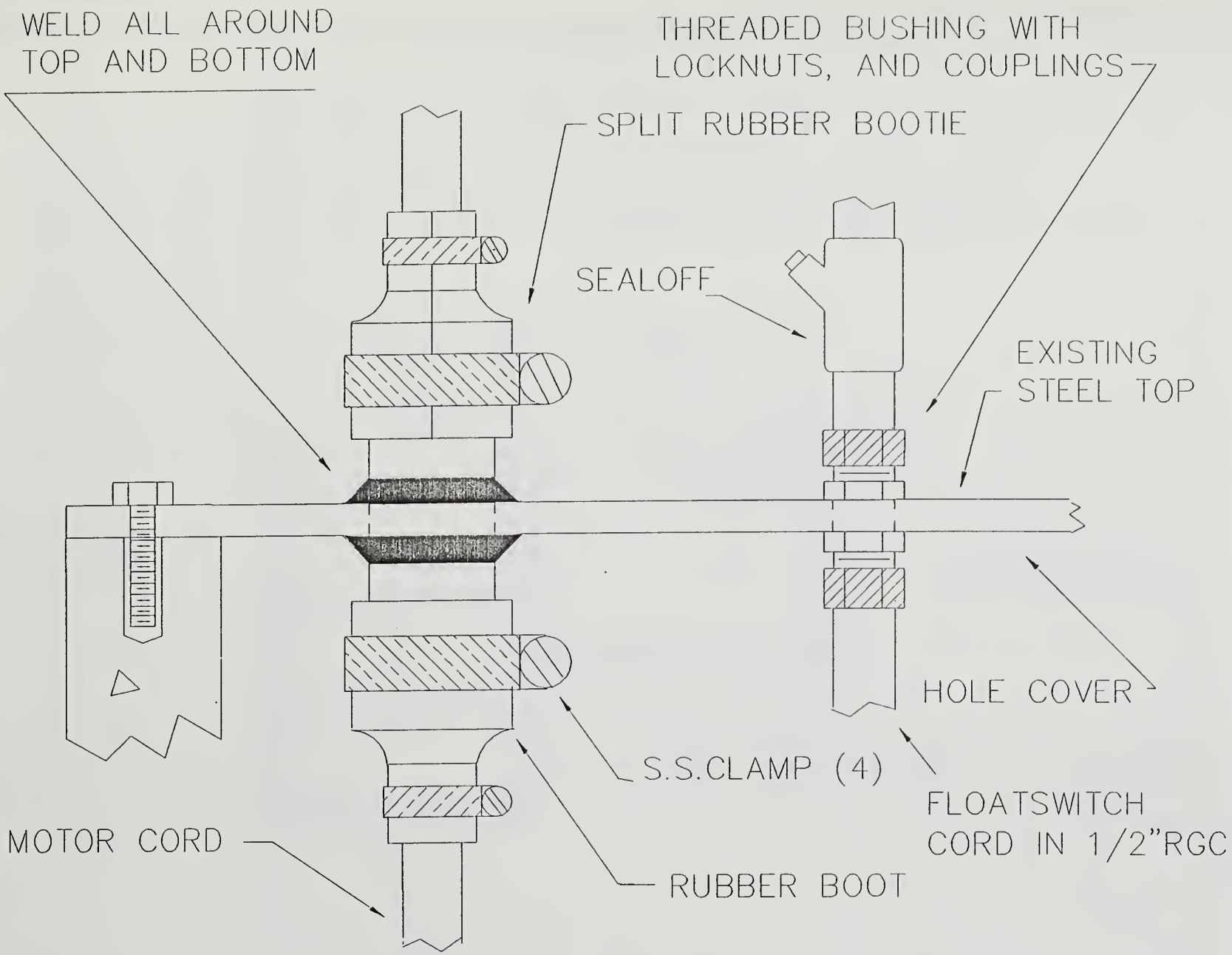
3/2/88 ED000136

3/2/88 ED000136



ELECTRICAL MOUNTING CHANNEL DETAIL

NO SCALE ED000137 10/29/87



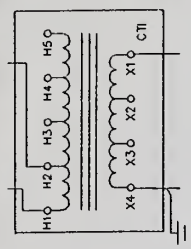
SLEEVE DETAIL

ED000138 10/29/87

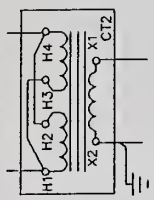
NO SCALE

ED000139 4/11/00

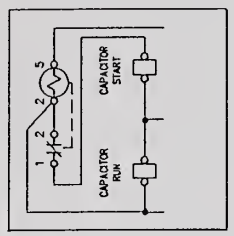
ELECTRICAL SYMBOLS

TRANSFORMER


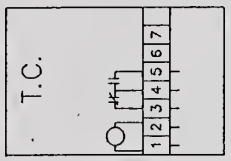
SL501

TRANSFORMER


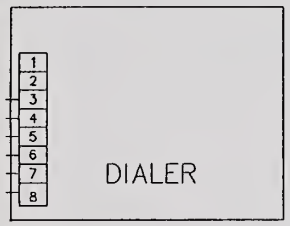
SL502

CAPACITOR/
STARTER RELAY


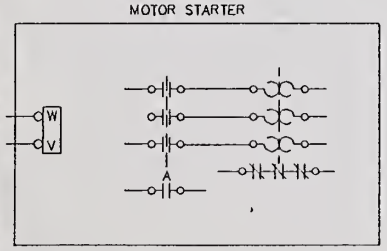
SL503

TIME CLOCK


SL504

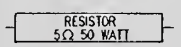


SL505

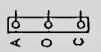
MOTOR STARTER


SL506

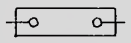
SL507

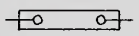


SL508



SL509

BUCHANAN 0362

SL510

FUSE

SL511

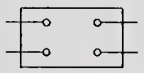


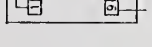
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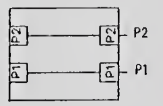
SL504


SL513

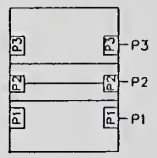

SL514


SL515

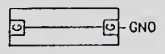
BUCHANAN 0362

SL510

MAIN BUS
2 POLE


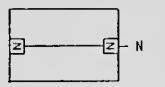
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MAIN BUS
3 POLE


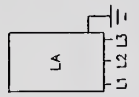
SL518

GROUND BUS


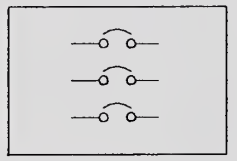
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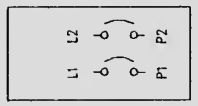
NEUTRAL BUS


SL520

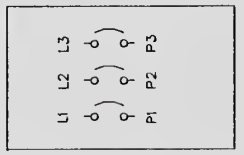
LIGHTNING
ARRESTOR


SL521

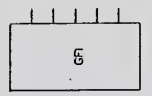
MCP

SL522

MAIN BREAKER – 2 POLE


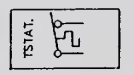
SL523

MAIN BREAKER – 3 POLE


SL524

GFI


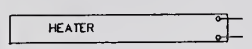
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THERMOSTAT


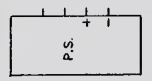
SL526

KEY

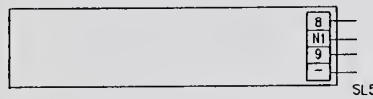
SL527

HEATER


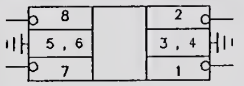
SL528

POWER SUPPLY
1.2.AMP


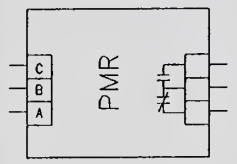
SL529

POWER SUPPLY – 7.2 AMPS


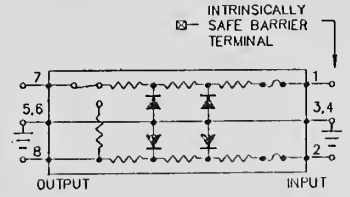
SL530

INTRINSICALLY SAFE BARRIER


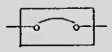
SL531

PHASE MONITOR RELAY


SL532

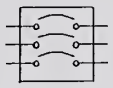
INTRINSICALLY
SAFE BARRIER
TERMINAL


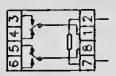
SL533

CB 1 POLE

SL534

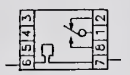
CB 2 POLE

SL535

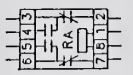
CB 3 POLE

SL536

ROI 88R
FOR TD


SL537

ROI 88R
FOR VMR


SL538

ROI 8BR
FOR ALT


SL539

ROI 11BR

SL540

RDI 11BS

SL541

TIME CLOCK
SL542

TCAM
5230
SL543

OPERATIONS COUNTER

SL544

RUNNING TIME METER

SL545

LIGHT

SL546

SONALERT

SL547

(4) 52BAK

SL548

(3) 52BAK

SL549

(2) 52BAK

SL550

NC
(1) 52BAJ

SL551

3-28-88

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGIONAL OFFICE
THE PACIFIC NORTHWEST REGION

DRAWN DATE
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

PHYSICAL SYMBOLS

SL500.DWG

SHT.
OF

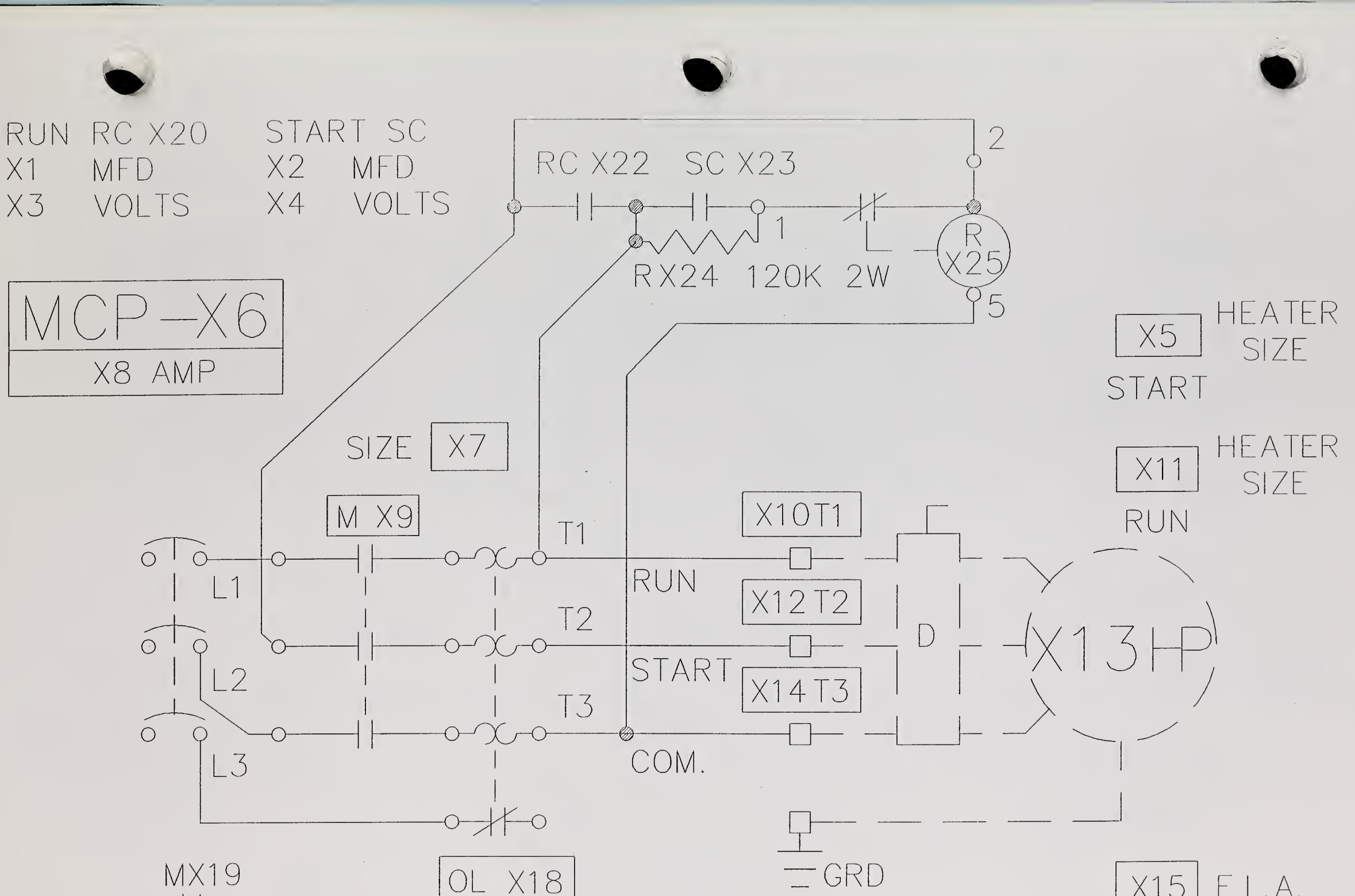
WIRING DIAGRAM SYMBOLS

DIVID-1.DWG

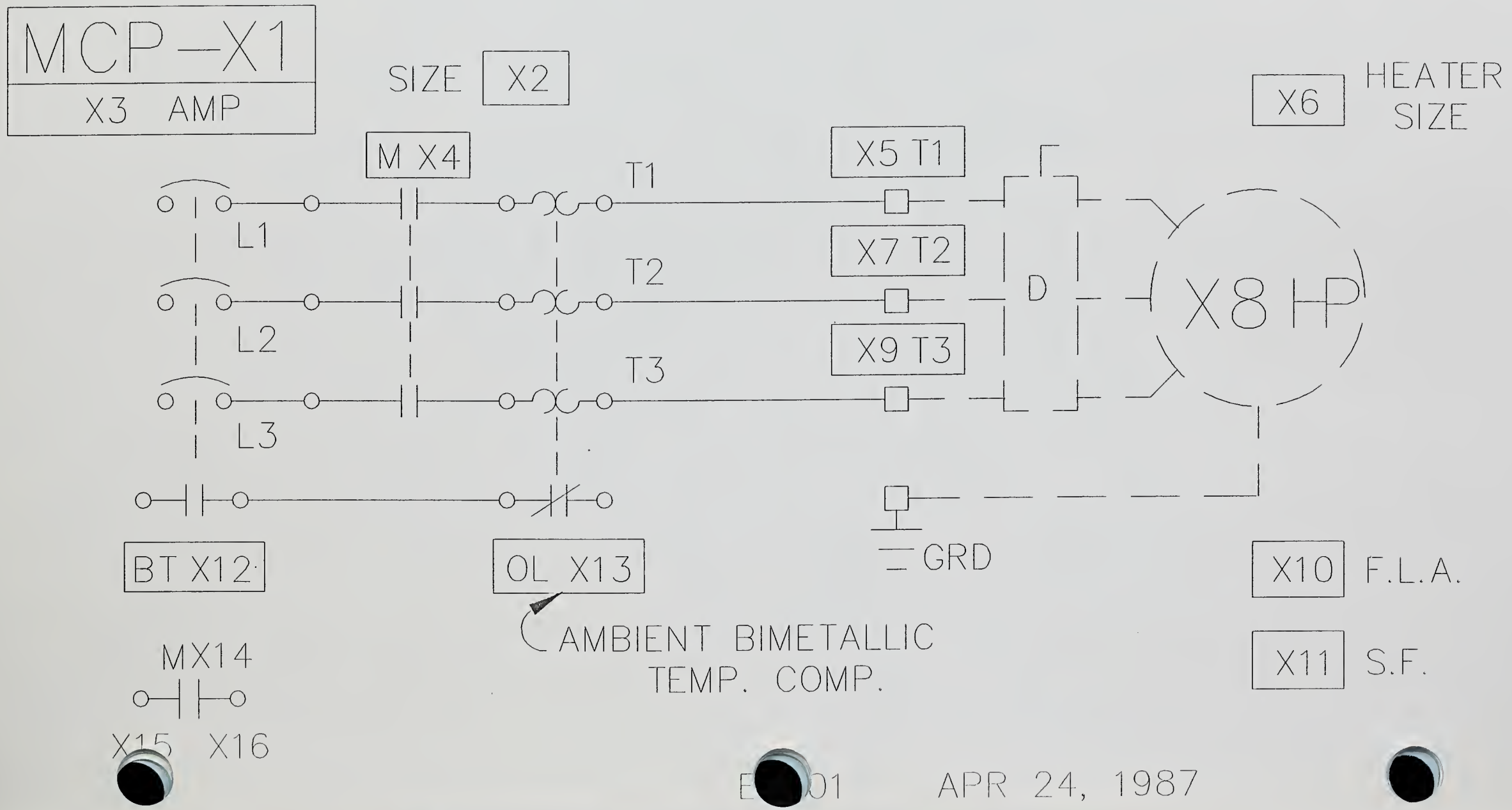
WIRING DIAGRAM SYMBOLS

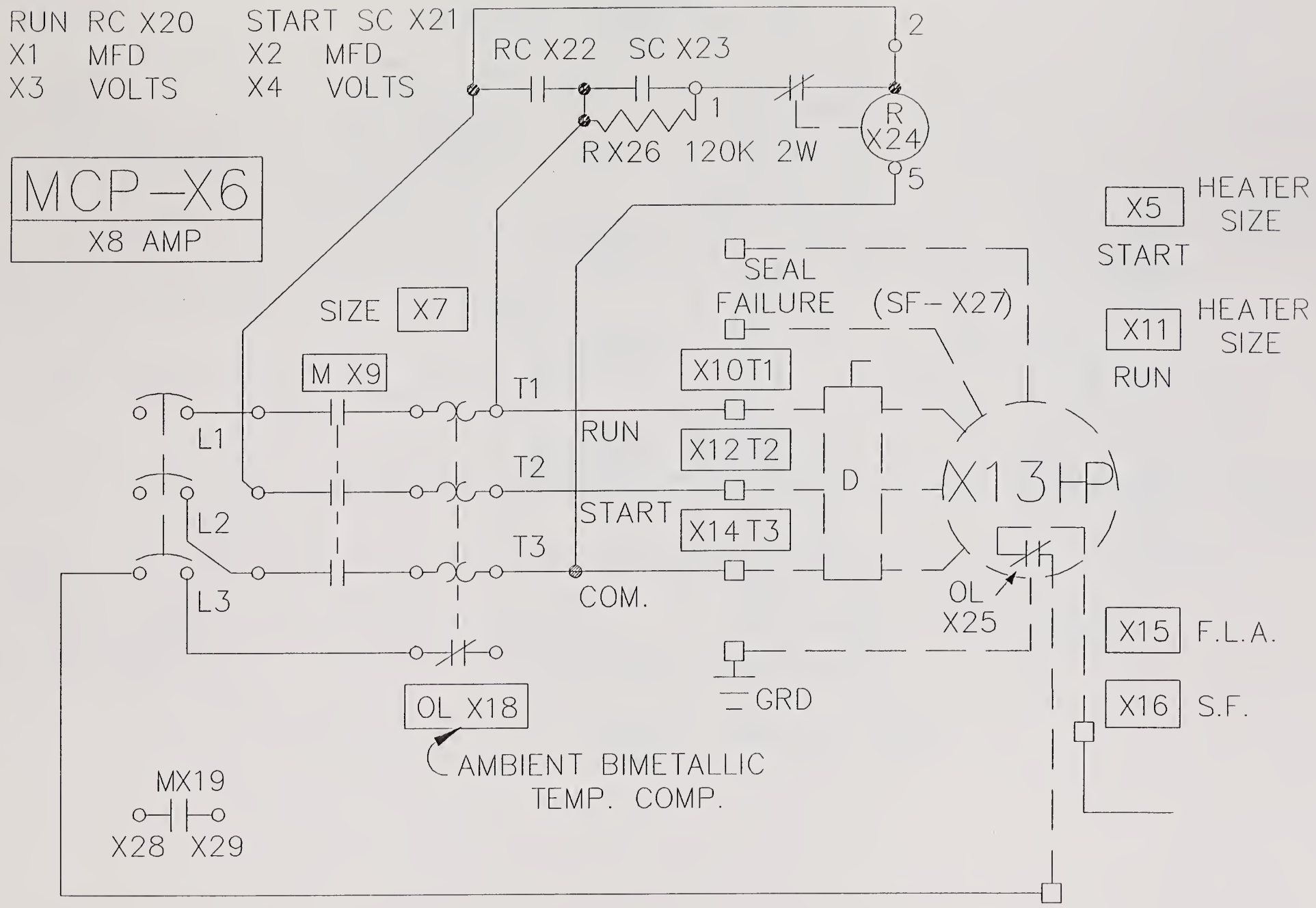
RUN RC X20
X1 MFD
X3 VOLTS

START SC
X2 MFD
X4 VOLTS

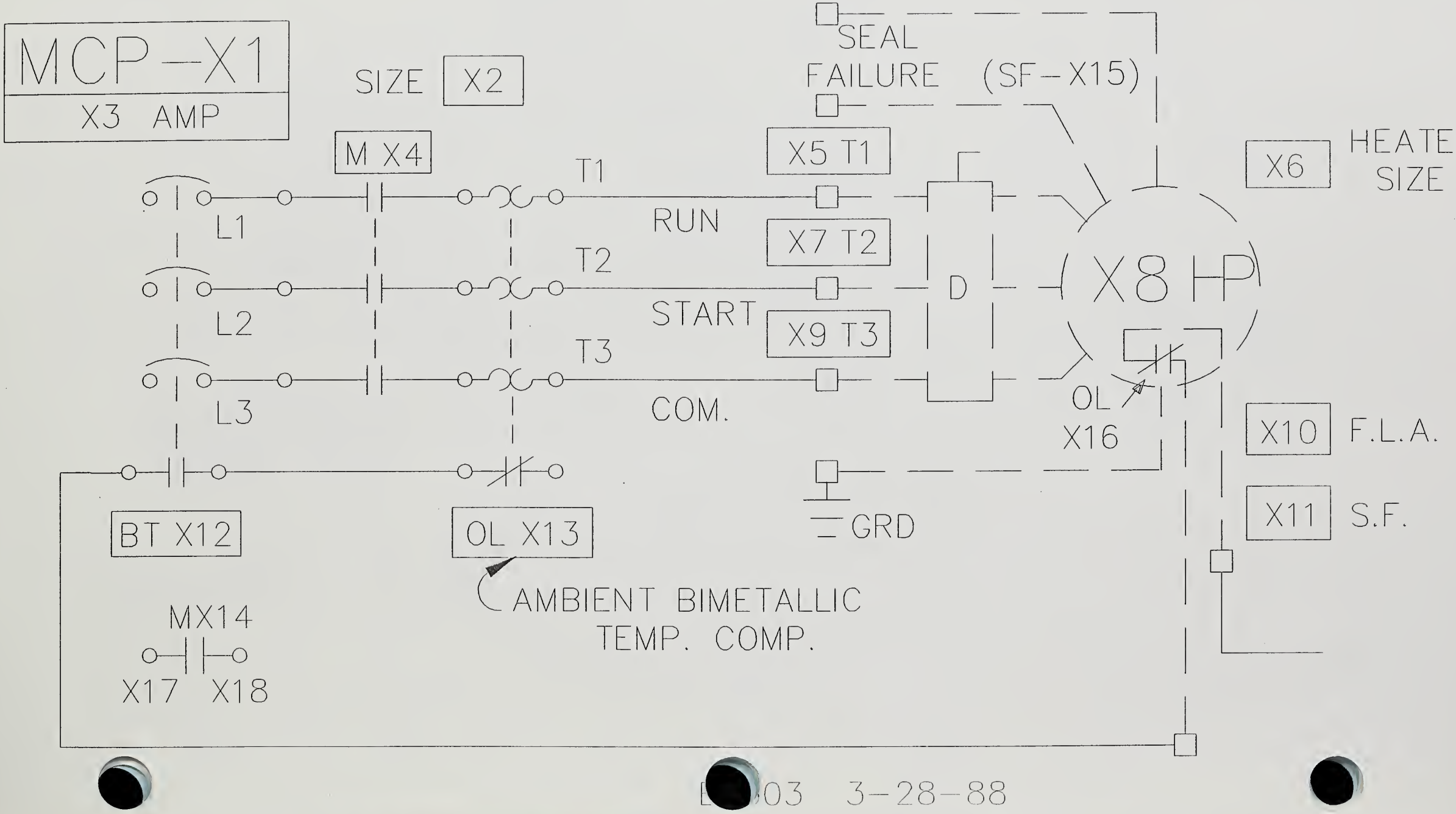


ES500 APR 24, 1987

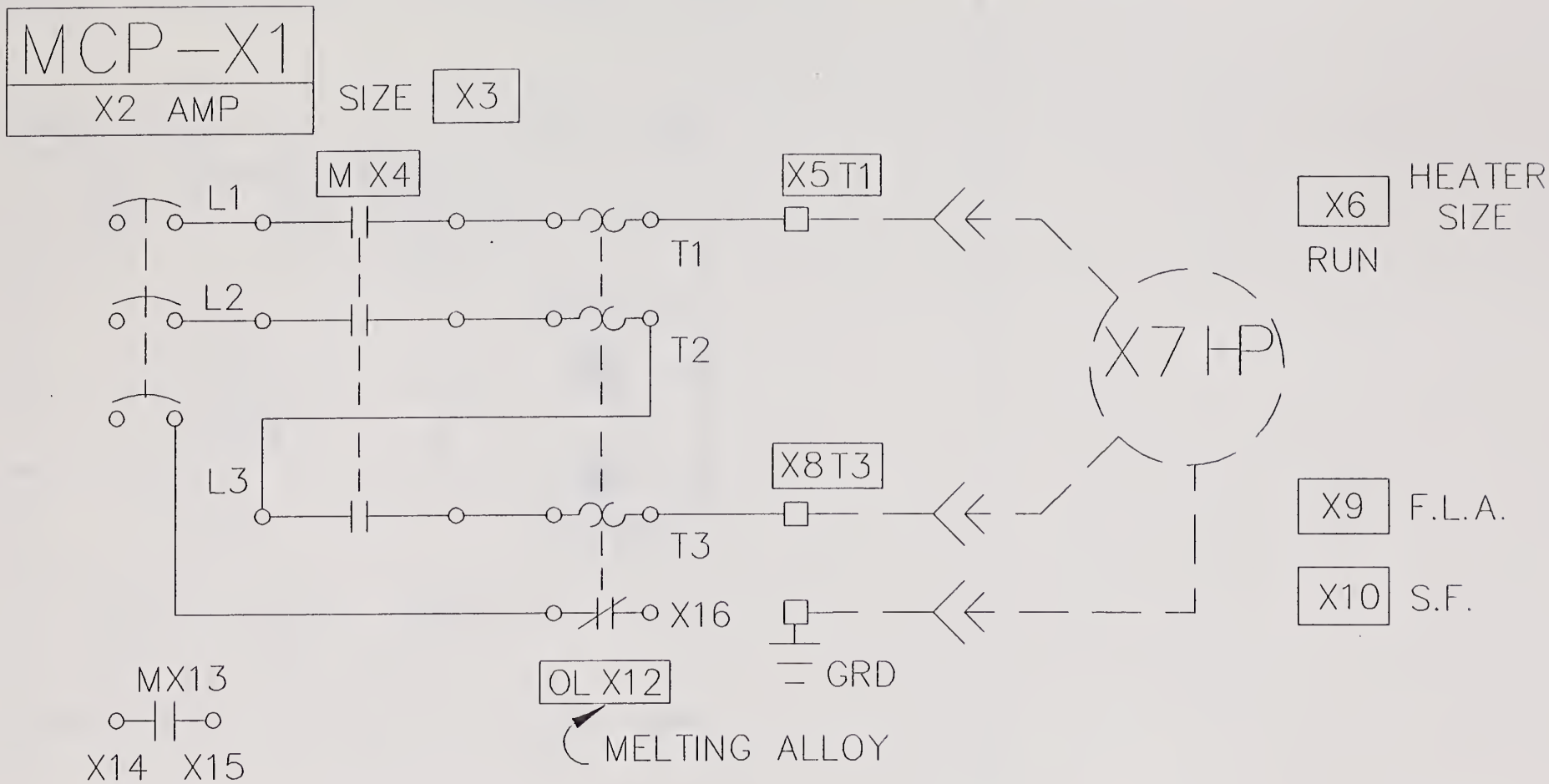

MCP–X1
X3 AMP
SIZE X2
M X4
T1
X5 T1
X6 HEATER SIZE
L1
T2
X7 T2
D
X8 HP
L2
T3
X9 T3
L3
BT X12
OL X13
GRD
X10 F.L.A.
AMBIENT BIMETALLIC
TEMP. COMP.
X11 S.F.
MX14
X15 X16



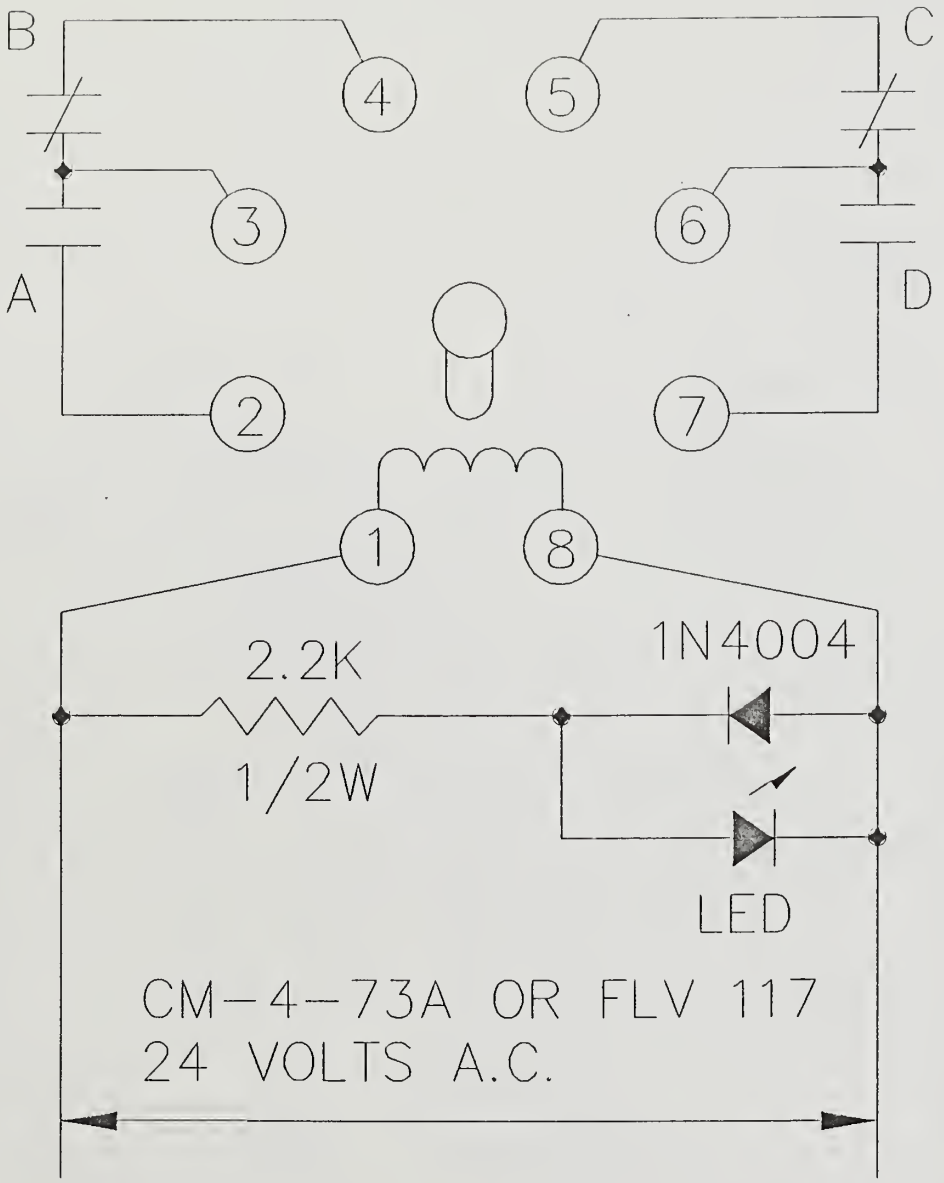
ES502 APR 24, 1987


MCP–X1
X3 AMP
SIZE X2
M X4
L1
L2
L3
T1
T2
T3
RUN
START
COM.
X5 T1
X7 T2
X9 T3
SEAL
FAILURE (SF–X15)
D
X8 HP
X6 HEATER SIZE
OL
X16
X10 F.L.A.
X11 S.F.
BT X12
OL X13
GRD
AMBIENT BIMETALLIC
TEMP. COMP.
MX14
X17 X18

03 3–28–88

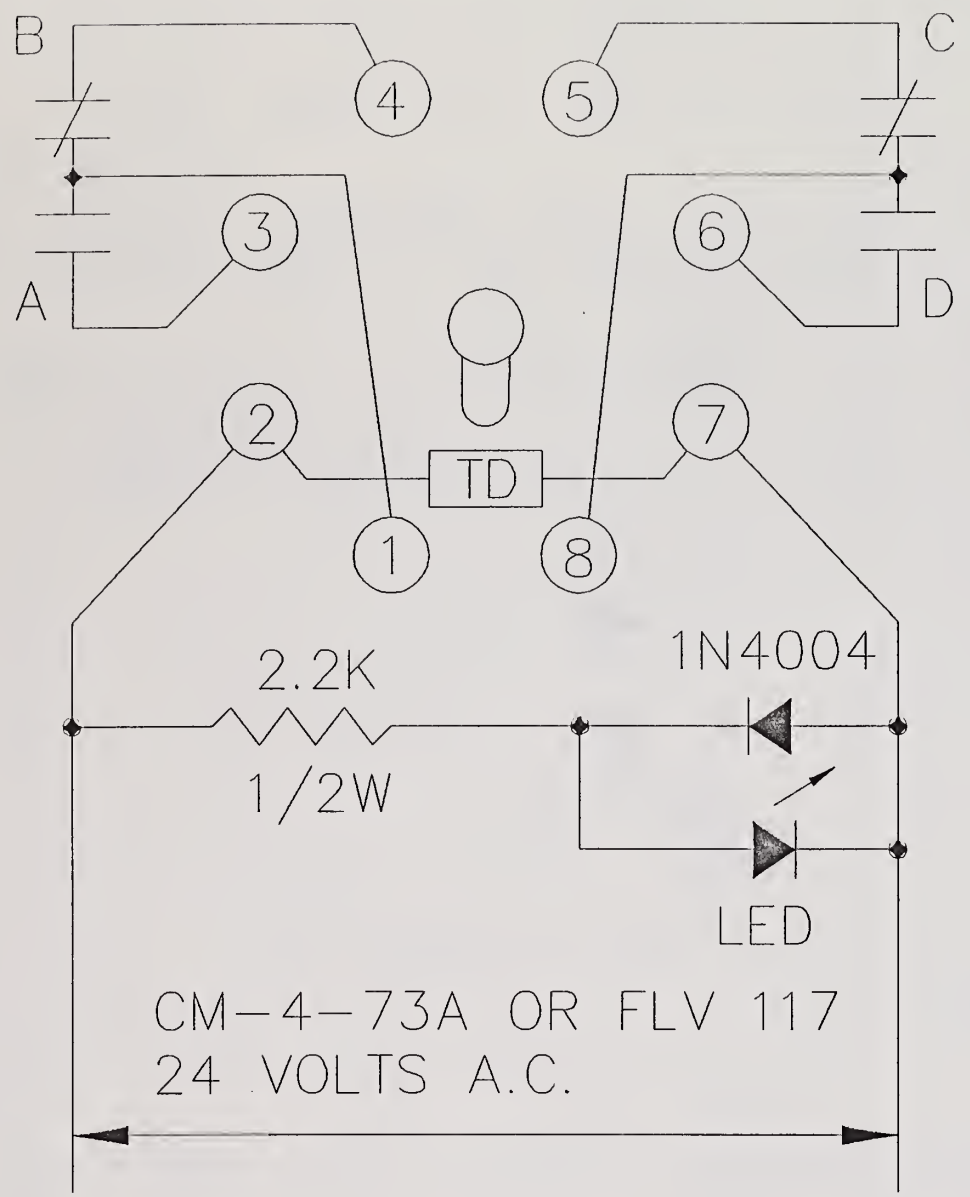


ES504 APR 24, 1987



WIRING DIAGRAM FOR HERMETICALLY SEALED 8-PIN OCTAL BASE PLUG-IN SEQUENCE RELAY (ALTERNATOR RELAY)

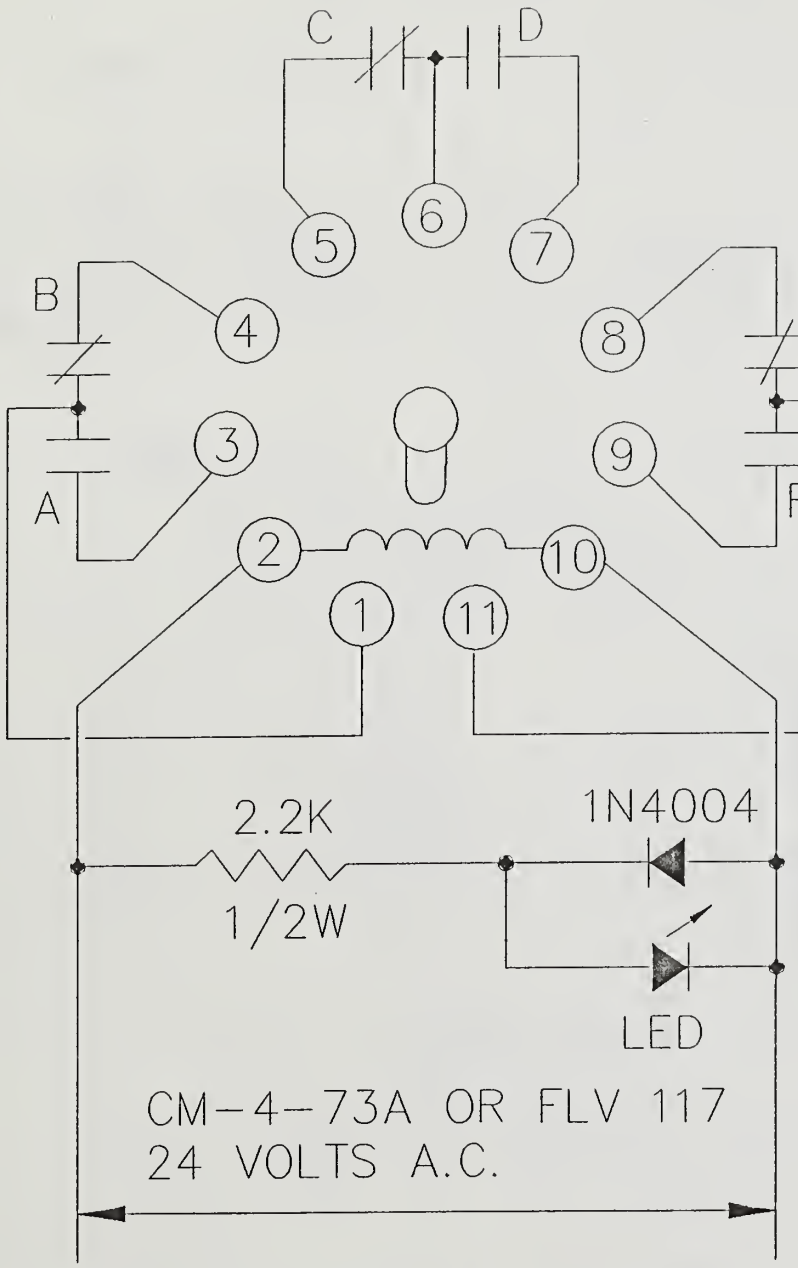
ALTERNATOR RELAY ES505



WIRING DIAGRAM FOR 8-PIN OCTAL BASE PLUG-IN SOLID STATE TIMER. ENCLOSED PLASTIC DUST COVER.

ONE SHOT/OFF DELAY/ON DELAY
TIME DELAY RELAY

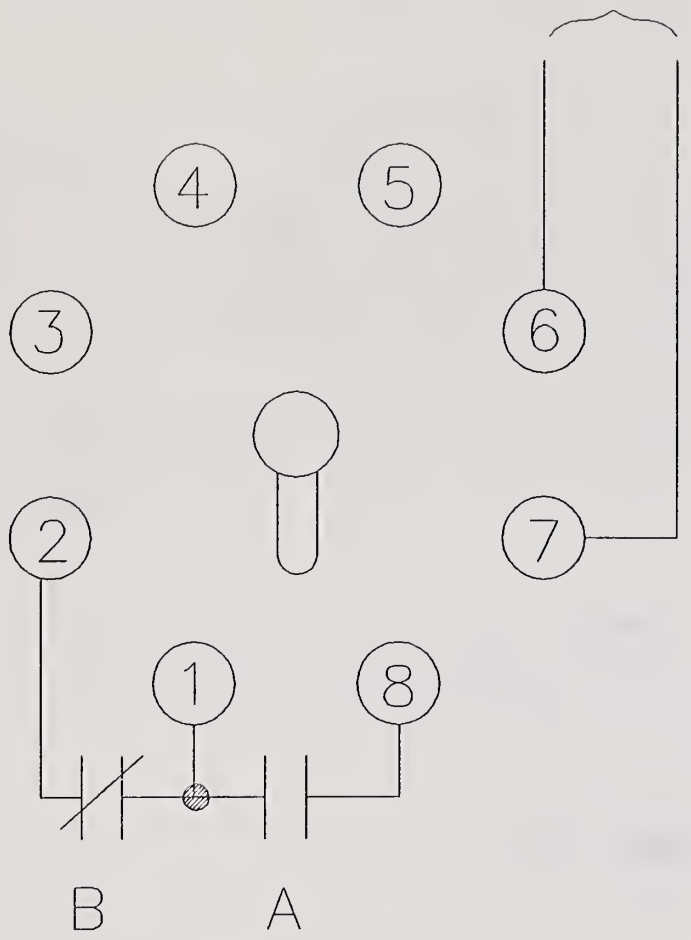
ES506



WIRING DIAGRAM FOR 11-PIN HERMETICALLY SEALED GENERAL PURPOSE 3PDT PLUG-IN CONTROL RELAY.

3POLE TIME DELAY &
GENERAL PURPOSE RELAY

ES507

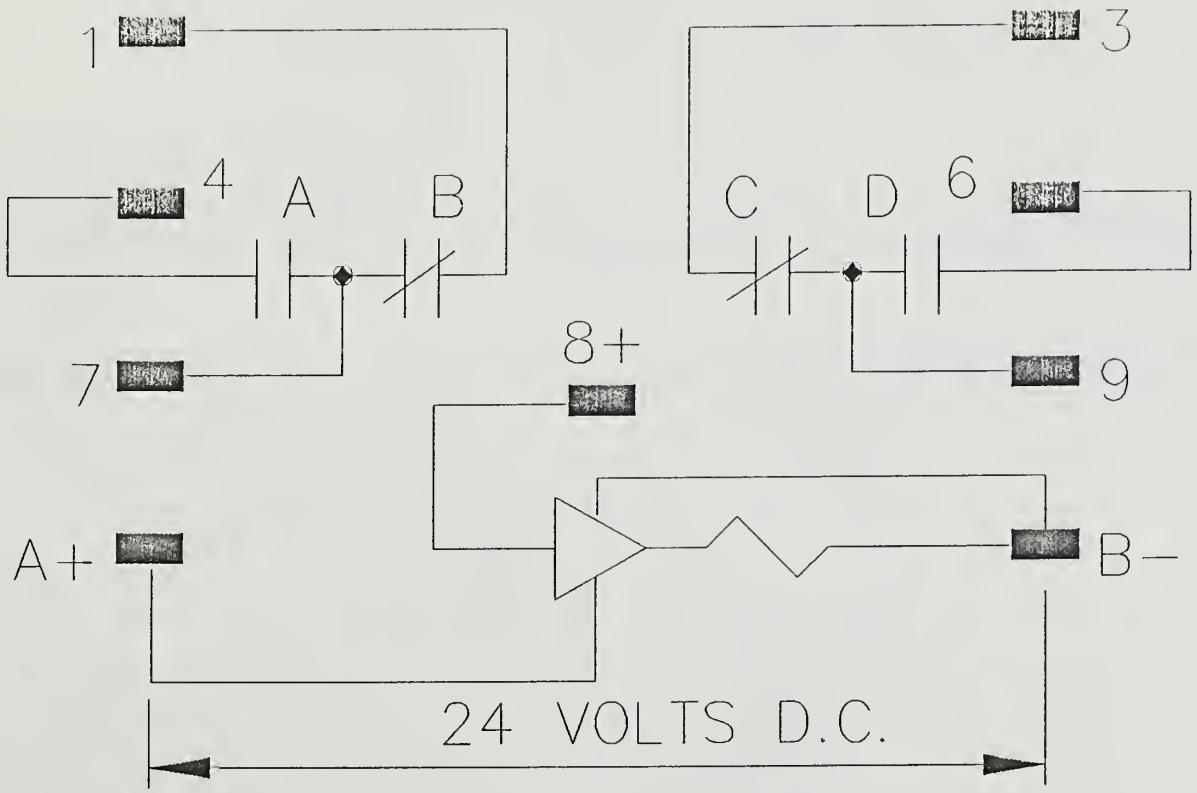


WIRING DIAGRAM FOR OVER/UNDER VOLTAGE RELAY.
ENCLOSED IN PLASTIC DUST COVER, INDUSTRIAL PLUG–IN TYPE

OVER/UNDER VOLTAGE

MONITOR RELAY

ES508



CONTROL : PINS 8+ AND B−
SUPPLY : PINS A+ AND B−

WIRING DIAGRAM FOR SOLID STATE AMPLIFIER DRIVEN GENERAL PURPOSE RELAY. ENCLOSED PLASTIC DUST COVER.

NOTE: SPECIAL PLUG−IN BASE REQUIRED FOR THIS TYPE OF RELAY.

AMPLIFIER RELAY ES509

A LINE

N1 LINE 52

CB9 10A

144

GRD

XFMR
T3

TELEPHONE DIALER

RADIO SHACK #43-165
NOTE: SEE SPECIFICATIONS FOR DIALER REQUIREMENTS

4 CONDUCTOR MODULAR PHONE CORD

GREEN →>>
RED →>>
BLACK →>>
YELLOW →>>

6 FOOT PHONE LINE WITH RJ11X JACK. RUN WIRES SEPARATELY IN 3/4" CONDUIT THRU CONTROL PANEL WALL

CH-4 { 1, 2
CH-3 { 3, 4
CH-2 { 5, 6
CH-1 { 7, 8

1 2 3 4 5 6

151 152

SPARE

6 CONDUCTOR CINCH - JONES PLUG/SOCKET. SEE SPECIFICATIONS

145

DIALER
OFF AUTO

TD18D
1 4

146 NCTC 147

148

149 150

REMOTE

LINE 54 (B) SS3 153 IL R (C) LINE 54

DIALER "OFF"

R11B
1 4

154

2 TD 18 7

0-180 SEC.

"OFF DELAY"
TDOD
230

A N1

E5 510

DIVID–11.DWG

MECHANICAL DRAWINGS & DETAILS

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

SYMBOLS

PIPING

- ANCHOR
- DIRECTION OF FLOW
- EXPANSION JOINT OR FLEXIBLE CONNECTION
- EXPANSION LOOP
- REDUCER
- DUPLEX STRAINER
- UNION
- VENT THRU ROOF

VALVES

- ISOLATION
- PLUG
- BALL
- CHECK (FLOW)
- BUTTERFLY
- PRESSURE REDUCING
- ELECTRIC OPERATOR

HEATING VENTILATING

- UNIT HEATER
- THERMOSTAT
- EXHAUST ROOF VENTILATOR (ERV)
- LOUVER AND SCREEN
- TRANSITION DUCT
- FLEXIBLE CONNECTION
- AHU — AIR HANDLING UNIT
- FLEXIBLE DUCT
- EXHAUST OR RETURN DUCT (SECTION)
- SUPPLY DUCT (SECTION)
- SUPPLY DUCT 12" SIDE SHOWN x 20" SIDE NOT SHOWN (PLAN) — S12 x 20
- TURNING VANES
- DAMPER AS SPECIFIED
- REGISTER SUPPLY (SCHEDULE NUMBER) — SR-1
- REGISTER RETURN (SCHEDULE NUMBER) — RR-1

ABBREVIATIONS

AB	ANCHOR BOLT	KW	KILOWATT
CFM	CUBIC FEET PER MIN	LWL	LOW WATER LEVEL
CI	CAST IRON	MAX	MAXIMUM
CD	CLEAN OUT	M.C.	MOTOR CONTROL
CW	POTABLE COLD WATER	MECH	MECHANICAL
D	DRIAN	MFR	MANUFACTURER
DIA,	DIAMETER	MEZZ	MEZZANINE
DN	DOWN	MIN	MINIMUM
DWG	DRAWING	No.,	NUMBER
EA	EACH	OC	ON CENTER
EL. ELV	ELEVATION	OD	OUTSIDE DIAMETER
EQ	EQUAL	OPNG	OPENING
EXH	EXHAUST	PL	PLATE
EXP	EXPANSION	PRV	PRESSURE RELIEF VALVE
FCD	FLOOR CLEAN OUT	PSI	POUND PER SQ INCH
FIN	FINISHED	REINF	REINFORCE
FL, FLR	FLOOR	REQ'D	REQUIRED
GALV.	GALVANIZED	RPM	REVOLUTION PER MINUTE
GEN	GENERATOR	RWP	RAIN WATER PIPE
HORIZ	HORIZONTAL	SP	SPACES
HP	HORSE POWER	SPECS	SPECIFICATIONS
HR	HEATING WATER RETURN	TYP	TYPICAL
HS	HEATING WATER SUPPLY	V	VENT
HW	POTABLE HOT WATER	VTR	VENT THRU ROOF
HWL	HIGH WATER LEVEL	W	WASTE
ID	INSIDE DIAMETER	W/	WITH
IE	INERT ELEVATION		

AC-1 SCHEDULE

TOTAL COOLING 13 MBH
ENTERING WET BULB 63°
ENTERING DRY BULB 80°
ENTERING WATER 55°
400 CFM @ 0.3" ESP 1/12 HP
TOTAL WATTS 1400
EER 9.6

PLUMBING FIXTURE SCHEDULE

DESIG.	FIXTURE	W	V	CW	HW	REMARKS

GRILLE SCHEDULE

DESIG.	CFM	SIZE	MAX. N.C.	REMARKS

EXHAUST FAN SCHEDULE

DESIG.	CFM	EXT. S.P.	BHP	MOTOR H.P.	REMARKS

RETURN/EXHAUST CEILING SCHEDULE

DESIG.	CFM	NECK SIZE	MAX. N.C.	REMARKS

SUPPLY DIFFUSER SCHEDULE

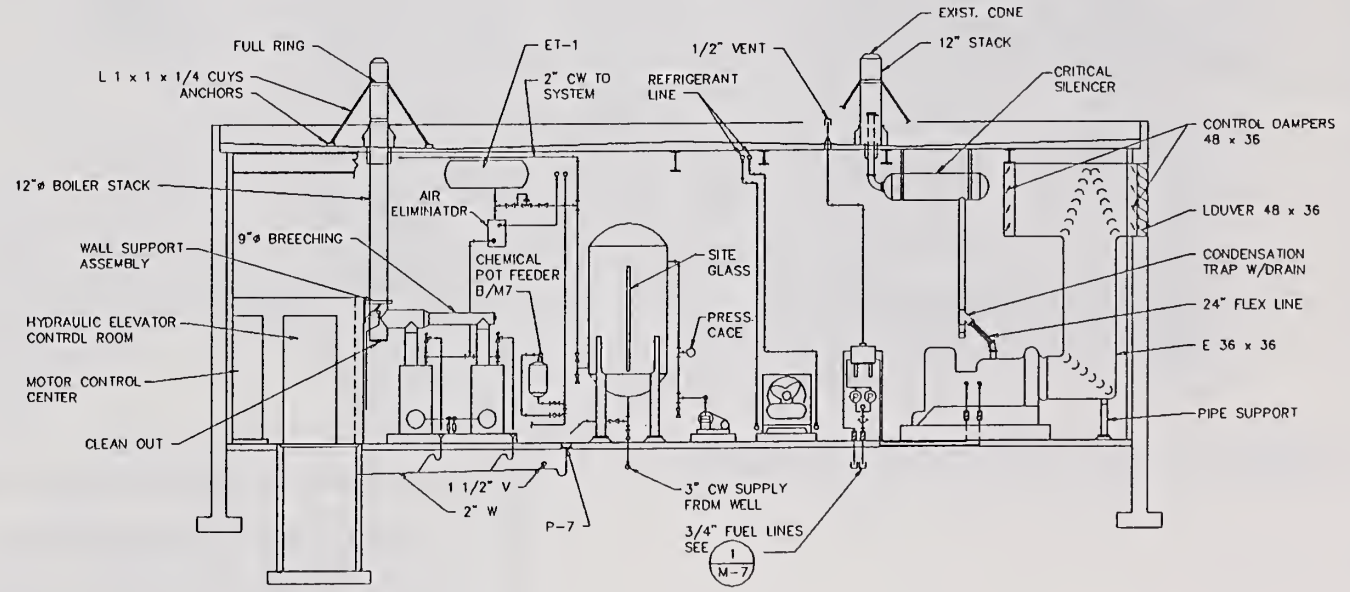
DESIG.	CFM	NECK SIZE	THROW	BLOW	MAX. N.C.	REMARKS

ELECT. HEAT SCHEDULE

DESIG.	WATTS	LENGTH	REMARKS

ELECTRIC FURNACE SCHEDULE

DESIG.	CFM	EXT. S.P.	MOTOR H.P.	KW	MIN. O.A.	REMARKS



SECTION 2 / M-3
NO SCALE

MD003400
MARCH 6,1987

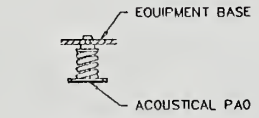
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SECTION & SCHEDULES

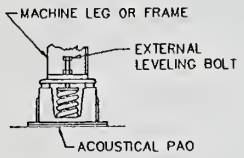
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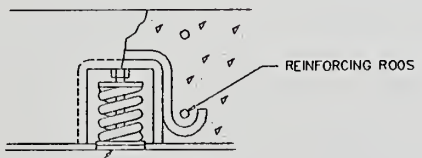
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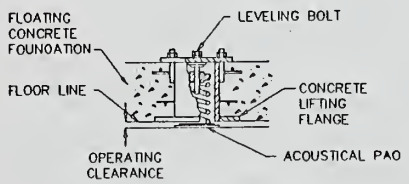
A. OPEN SPRING MOUNT



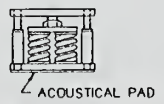
B. HOUSED SPRINC MOUNT



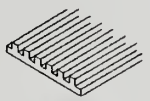
C. CONCRETE INSERT MOUNT



O. CONCRETE INSERT MOUNT FOR LARGE FOUNOATION



E. RESTAINED MOUNT


F. RUBBER PAO


G. RUBBER MOUNT


H. LAMINATEO PAO


J. RUBBER ISOLATION HANGER


K.


L


M.

K. OOUBLE RUBBER HANGER
L. SPRING HANGER
M. RUBBER ANO SPRINC HANCER

GENERAL PRECAUTIONS
1. AOJUST FOR PROPER ALIGNMENT ANO LOAOING.
2. EXAMINE OEAO LOAO AND OPERATING LOAO CONDITION.
3. AVOIO "GROUNOING" THE ISOLATOR.
4. MAINTAIN ALIGNMENT OF THE SYSTEM COMPONENTS BEING ISOLATING WITHOUT IMPOSING EXCESS STRESS.
5. CHECK HANGER ROO SIZE FOR ALLOWABLE LOADS AT THE ISOLATING DEVICE ANO AT THE UPPER ANO LOWER ATTACHMENTS TO STRUCTURES, OUCT, EQUIPMENT, ETC.

TYPICAL ISOLATION DEVICES

SYMBOL MEANING	SYMBOL
POINT OF CHANGE IN OUCT CONSTRUCTION (BY STATIC PRESSURE CLASS)	
OUCT (1ST FIGURE, SIDE SHOWN 2NO FICURE, SIOE NOT SHOWN)	20 x 12
ACOUSTICAL LINING OUCT DIMENSION FOR NET FREE AREA	
OIRECTION OF FLOW	
DUCT SECTION (SUPPLY)	S 3D x 12
DUCT SECTION (EXHAUST OR RETURN)	E OR R 20 x 12
INCLINED RISE (R) OR OROP (D) ARROW IN OIRECTION OF AIR FLOW	R
TRANSITIONS: GIVE SIZES NOTE F.O.T. FLAT ON TOP OR F.O.B. FLAT ON BOTTOM IF APPLICABLE	
STANOARD BRANCH FOR SUPPLY & RETURN (NO SPLITTER)	S R
SPLITTER OAMPER	
VOLUME OAMPER MANUAL OPERATION	VD
AUTOMATIC OAMPERS MOTOR OPERATEO	SEC. MOO
ACCESS DOOR (AO) ACCESS PANEL (AP)	OR AO
FIRE OAMPER. SHOW ⊣◁ VERTICAL POS. SHOW ⊣◇ HORIZ. POS.	FD A AO
SMOKE OAMPER	SD AO
CEILING DAMPER OR ALTERNATE PROTECTION FOR FIRE RATEO CLG	
TURNING VANES	
FLEXIBLE OUCT FLEXIBLE CONNECTION	
GOOSENECK HOOO (COWL)	
BACK ORAFT OAMPER	BOO

SYMBOL MEANING	SYMBOL
SUPPLY GRILLE (SG)	20 x 12 SG / 700 CFM
RETURN (RG) OR EXHAUST (EC) CRILLE (NOTE AT FLR OR CLC)	20 x 12 RG / 700 CFM
SUPPLY RESISTER (SR) (A GRILLE + INTEGRAL VOL. CONTROL)	20 x 12 SR / 700 CFM
EXHAUST OR RETURN AIR INLET CEILING (INOICATE TYPE)	20 x 12 GR / 700 CFM
SUPPLY OUTLET, CEILING, ROUNO (TYPE AS SPECIFIEO) INOICATE FLOW OIRECTION	2D / 700 CFM
SUPPLY OUTLET, CEILING, SOUARE (TYPE AS SPECIFIEO) INOICATE FLOW OIRECTION	12 x 12 / 700 CFM
TERMINAL UNIT, (GIVE TYPE ANO/OR SCHEOULE)	TU
COMBINATION OIFFUSER ANO LICHT FIXTURE	
OOOR GRILLE	OG 12 x 6
SOUNO TRAP	ST
FAN & MOTOR WITH BELT GUARO & FLEXIBLE CONNECTIONS	
VENTILATING UNIT (TYPE AS SPECIFIEO)	
UNIT HEATER (OOWN BLAST)	
UNIT HEATER (HORIZONTAL)	
UNIT HEATER (CENTRIFUGAL FAN) PLAN	
THERMOSTAT	T
POWER OR GRAVITY ROOF VENTILATOR – EXHUAST (ERV)	
POWER OR CRAVITY ROOF VENTILATOR – INTAKE (SRV)	
POWER OR GRAVITY ROOF VENTILATOR – LOUVEREO	
LOUVERS & SCREEN	36 x 24L

SYMBOLS FOR VENTILATION & AIR CONDITIONING

MDDD1102
APRIL 8,1987

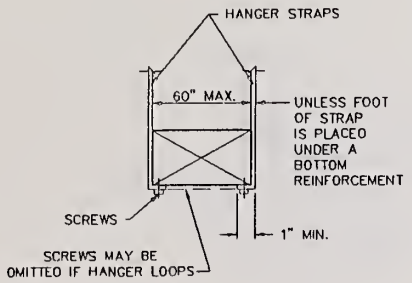
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FOREST SERVICE

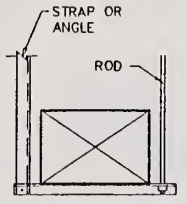
THE PACIFIC NORTHWEST REGION

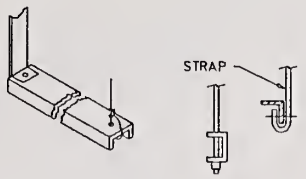
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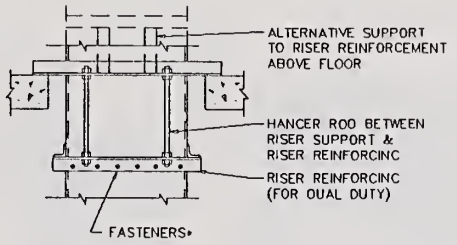
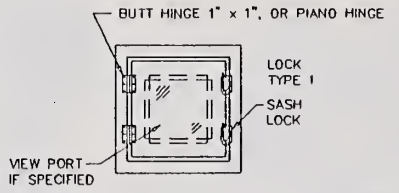


FIG. B

* MINIMUM NUMBER OF FASTENERS ON EACH OF TWO SUPPORT BARS

LARGEST DUCT DIM.	MINIMUM NUMBER OF FASTENERS
16" AND DOWN	2
17" – 24"	3
OVER 24"	LARGEST DUCT DIM. DIVIDED BY 8

LOCATE A FASTENER WITHIN 2" OF THE DUCT EDGES. LOCATE OTHERS AT EVENLY SPACED INTERVALS.



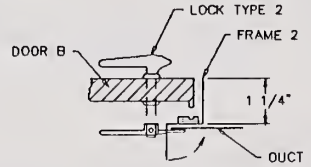
FRAME 1
HINGE POSITION 1

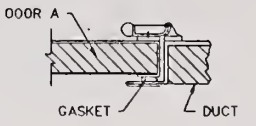


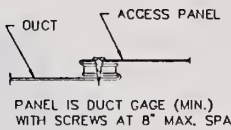
FRAME 2
HINGE POS. 2



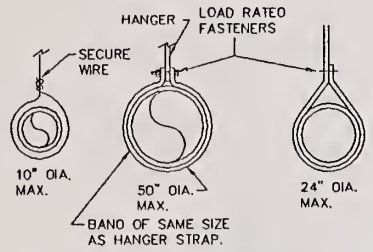
FRAME 3
HINGE POS. 3



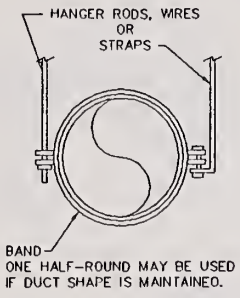




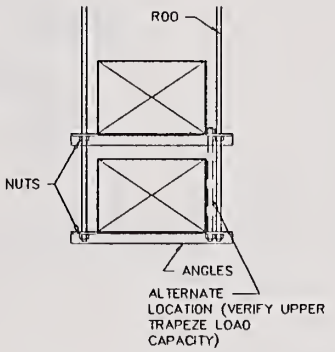
PANEL IS DUCT GAGE (MIN.) WITH SCREWS AT 8" MAX. SPACING



HANGERS MUST NOT DEFORM DUCT SHAPE



STRAP HANGERS



REINFORCEMENT MAY BE USED FOR ATTACHMENT IF IT QUALIFIES FOR BOTH DUTIES.

DO NOT EXCEED ALLOWABLE LOAD LIMITS.

TRAPEZE HANGERS

LOWER HANGER ATTACHMENTS

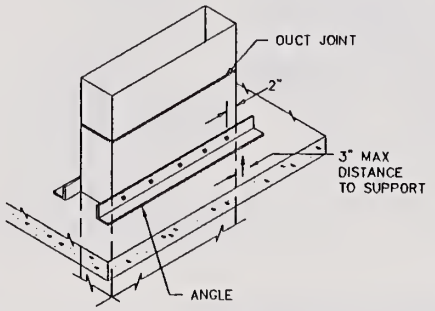


FIG. A

SUGGESTED SIZING FOR SUPPORT OF 12 FT. OF DUCT

DUCT SIZE	ANGLE
36" x 18"	1 1/2" x 1 1/2" x 1/8"
48" x 24"	1 1/2" x 1 1/2" x 1/8"
60" x 30"	1 1/2" x 1 1/2" x 3/16"
60" x 60"	1 1/2" x 1 1/2" x 1/4" OR 2" x 2" x 1/8"

OVER 60" – INCREASE ANGLE DUCT SIZE AS REQUIRED FOR SPACE & DUCT SIZE

RISER SUPPORT – FROM FLOOR

	DOOR SIZE	NO. HINGES	NO. LOCKS	METAL GAGE		
				FRAME	DOOR	BACK
2" W.G. STATIC AND LESS	12" x 12"	2	1-S	24	26	26
	16" x 20"	2	2-S	22	24	26
	24" x 24"	3	2-S	22	22	26
3" W.C. STATIC	12" x 12"	2	1-S	22	22	26
	16" x 20"	2	1-S, 1-T, 1-B	20	20	26
	24" x 24"	3	2-S, 1-T, 1-B	20	20	24
4" W.G. TO 10" W.G.	12" x 12"	2	1-S, 1-T, 1-B	20	20	26
	16" x 20"	3	2-S, 1-T, 1-B	20	18	24
	24" x 24"	3	2-S, 2-T, 2-B	18	18	24

S = SIDE OPPOSITE HINGES, T = TOP, B = BOTTOM

CONSTRUCTION AND AIRTIGHTNESS MUST BE SUITABLE FOR THE DUCT PRESSURE CLASS USED.

DUCT ACCESS DOORS

M0001101
APRIL 7,1987

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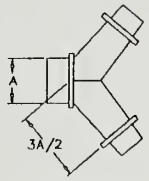
THE PACIFIC NORTHWEST REGION

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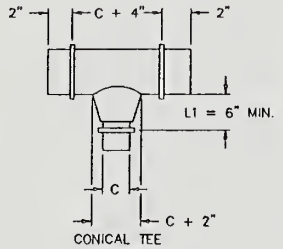
MISC. DETAILS

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OF ____

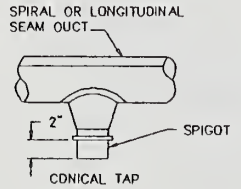
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WYE FITTING



CONICAL TEE FITTING



CONICAL TAP

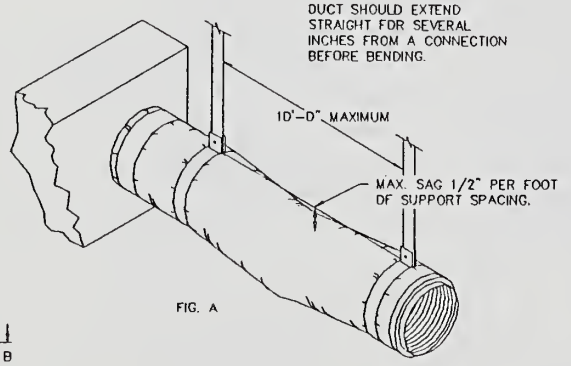
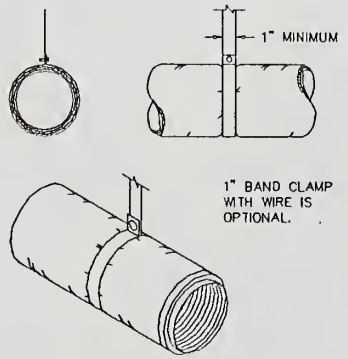
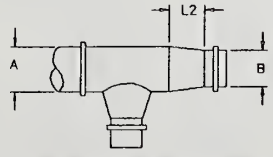
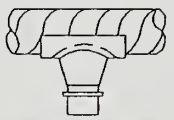


FIG. A

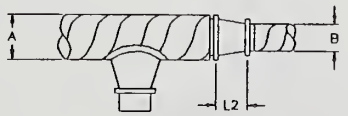




CONICAL TEE AND REDUCER FITTING



CONICAL SADDLE TAP

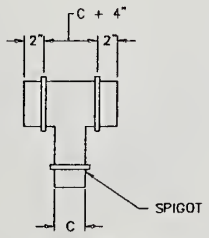


ALTERNATE ARRANGEMENT

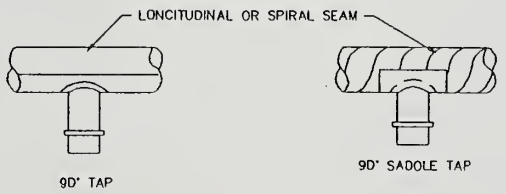
L2 = A – B (4" MIN.)

TAPS MAY HAVE SCREWS

CONICAL TEES



90° TEE FITTING



90° TAP

90° SADOLE TAP

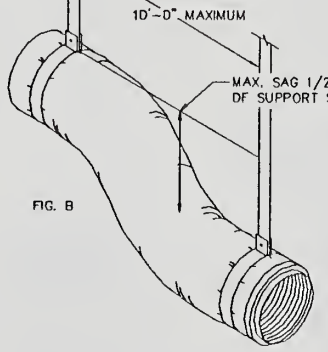
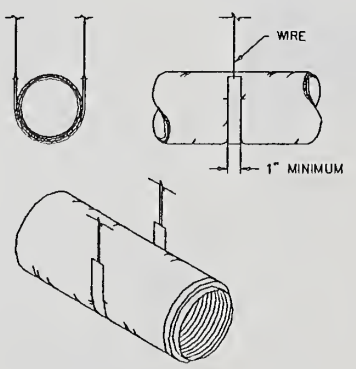
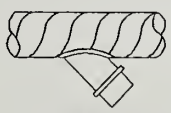


FIG. B

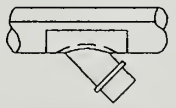


SUPPORT SYSTEM MUST NOT DAMAGE DUCT OR CAUSE OUT OF ROUND SHAPE.

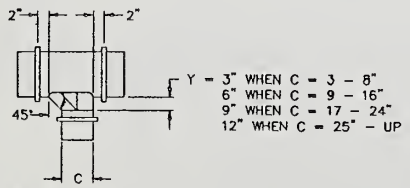
FLEXIBLE DUCT SUPPORTS



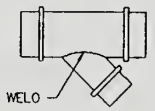
45° LATERAL TAP



45° LATERAL SADDLE TAP



90° TEE WITH OVAL TO ROUND TAP



45° LATERAL FITTING

TAPS MAY HAVE SCREWS.
STANOARO SPIGOT LENGTH IS 2".

90° TEES AND LATERALS

M00D11DD
APRIL 6,1987

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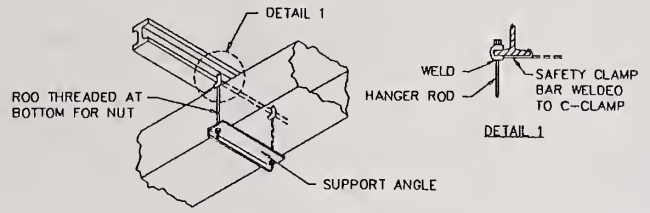
THE PACIFIC NORTHWEST REGION

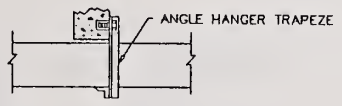
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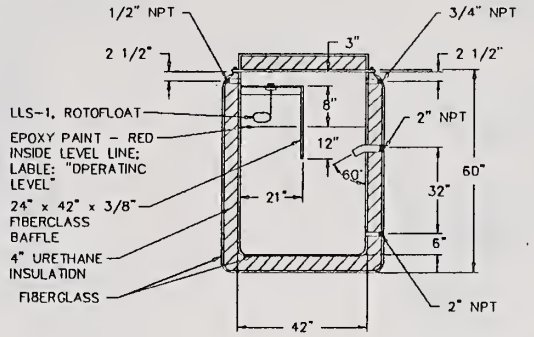
MIS

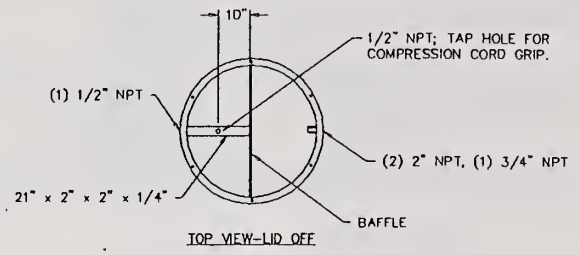
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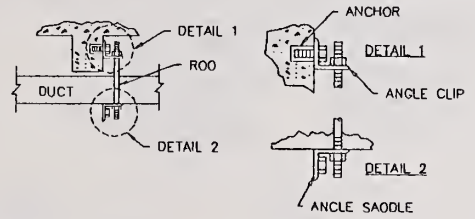






BRINE TANK DETAILS

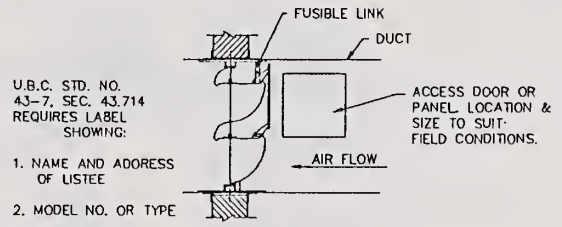
NO SCALE



MAXIMUM DIAMETER OF ROUND DUCT OR SIDE OF RECTANGULAR DUCT	HORIZONTAL SUPPORT ANGLE	HANGER	HANGER SPACINC
TO 36"	1 1/2" x 1 1/2" x 1/8"	1/4" ROUND RDD OR 1" x 1" x 1/8" ANGLE	8'-0" O.C.
OVER 36"	2" x 2" x 1/8"	1/4" ROUND RDD OR 1" x 1" x 1/8" ANGLE	8'-0" O.C.
OVER 48"	2" x 2" x 1/8"	5/16" ROUNO ROD OR 1" x 1" x 1/8" ANCLE	8'-0" O.C.
OVER 60" < 84"	2" x 2" x 1/8"	3/8" ROUND ROD OR 1" x 1" x 1/8" ANGLE	8'-0" O.C.
OVER 84"	DESIGN REDUIRED		

TRAPEZE - TYPE SUPPORTS

NO SCALE



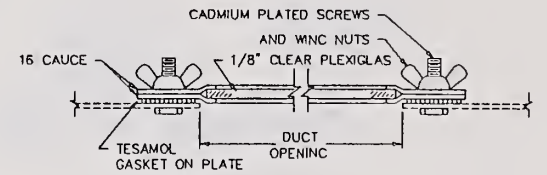
U.B.C. STD. NO. 43-7, SEC. 43.714 REQUIRES LABEL SHOWING:

1. NAME AND ADORESS OF LISTEE
2. MODEL NO. OR TYPE
3. SYMBDL, SERIAL, OR ISSUE NO. OF THE LISTING AGCY.
4. RATINC
5. WORDS "DUCT," "WALL" OR "CEILINC" TO INDICATE APPLICABLE USE.



U.B.C. STANDARO NO. 9-3
SEC. 9.306 PROHIBITS USE OF SCREWS FOR ACCESS TO DAMPER LINKS.

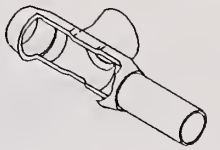
TYPICAL ACCESS PANEL DETAILS



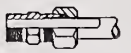
SECTION THRU UNIT



REFRIGERATOR TYPE FLARED - TUBING FITTINGS



SOLDER - TYPE FITTINC



SAE COMPRESSION TUBING FITTINGS



FLARED - TUBING FITTINCS

MDDD1DD2
APRIL 1,1987

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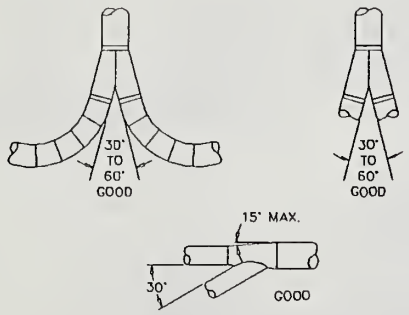
THE PACIFIC NORTHWEST REGION

DRAWN ____ DATE ____
DESIGNED ____ DATE ____
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MISC. OETAILS

SHT. OF

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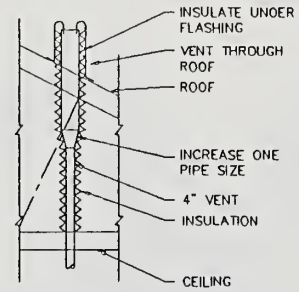
BRANCH ENTRY

BRANCHES SHOULD ENTER AT GRAOUAL EXPANSIONS ANO AT AN ANGLE OF 30° OR LESS (PREFFEREO) TO 45° IF NECESSARY.



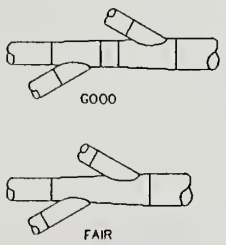
ELBOW RADIUS

ELBOWS SHOULO BE 2 OR 2 1/2 DIAMETERS CENTERLINE RADIUS EXCEPT WHERE SPACE OOES NOT PERMIT.



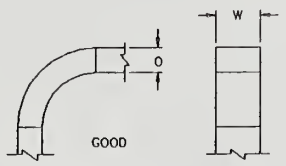
2 VENT THROUGH ROOF DETAIL

NO SCALE



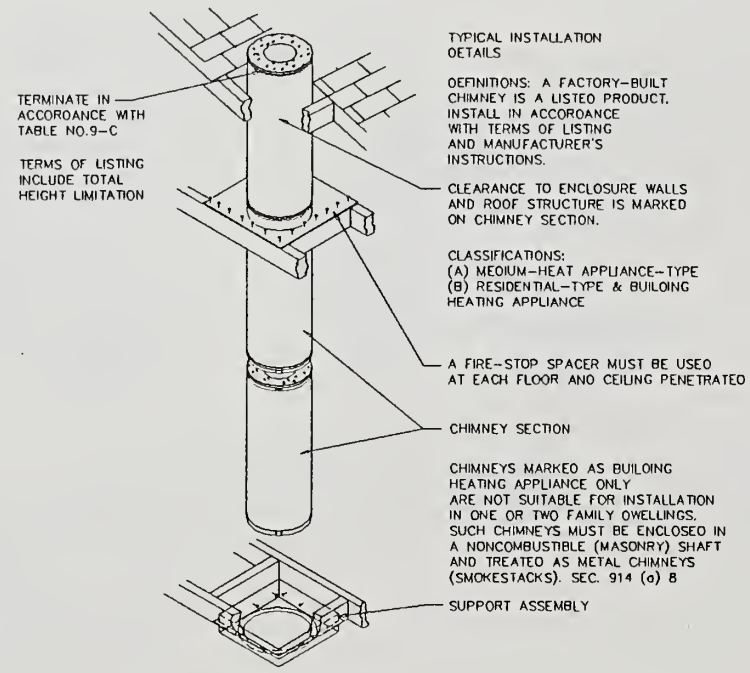
BRANCH ENTRY

BRANCHES SHOULO NOT ENTER DIRECTLY OPPOSITE EACH OTHER.

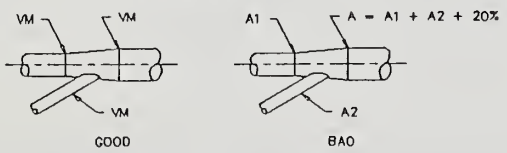


ASPECT RATIO

KEEP AR (W/D) HIGH IN USING RECTANGULAR OUCT.



VM = MINIMUM TRANSPORT VELOCITY
A = CROSS SECTION AREA



PROPER DUCT SIZE

SIZE THE OUCT TO HOLD THE SELECTED TRANSPORT VELOCITY OR HIGHER.

		SOUND ATTENUATEO OUCT
		INSULATEO OUCT
	B	BUTTERFLY OAMPER
	AD	AUTOMATIC OAMPER
Ⓣ	F-1	THERMOSTAT FOR FURNACE
Ⓣ	EH	THERMOSTAT FOR ELECTRIC HEAT
— — —	CW	COLO WATER
— — —	HW	HOT WATER
—⋈—		VALVE
———		WASTE ABOVE GRAOE
- - - - - - -		VENT
——⌽		CLEANOUT
W.H.		15 GALLON – WATER HEATER
M.P.		MECHANICAL TRAP PRIMER
P-___		"P" FIXTURE NO.___, SEE SPEC'S
H.B.		HOSE BIBB – FROST PROOF
C.O.		CLEAN OUT
V.T.R.		VENT TO ROOF
W.H.A.		MECH. WATER HAMMER ARRESTOR
E.F.		EXHAUST FAN
Ⓣ		THERMOSTAT

M0001001
APRIL 1,1987

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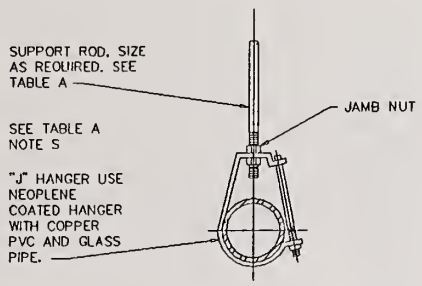
THE PACIFIC NORTHWEST REGION

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REVIEWED ____ DATE ____

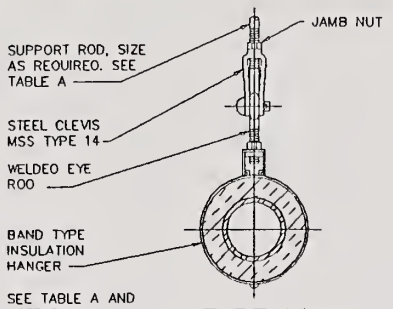
MISC. OU[illegible] ETAILS

SHT. ____
OF ____

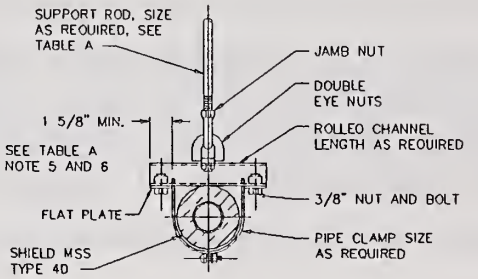
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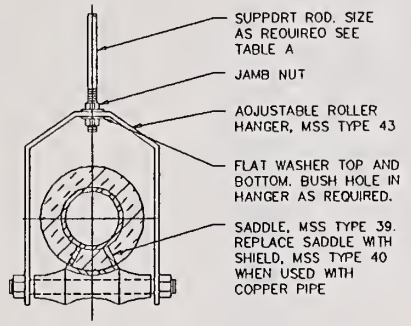
TYPE II
1/2" THROUGH 8" PIPE



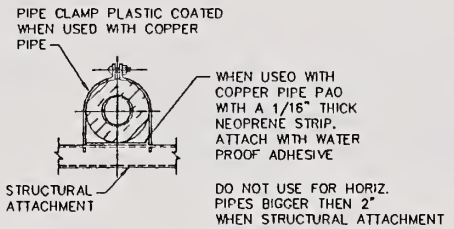
TYPE VI
1/2" THROUGH 12" PIPE



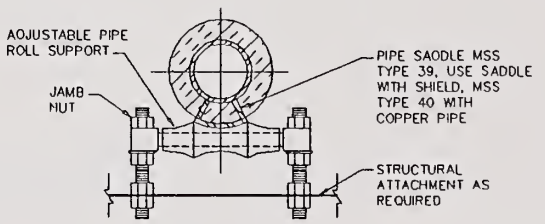
TYPE VII
3/8" THROUGH 3" PIPE



TYPE VIII



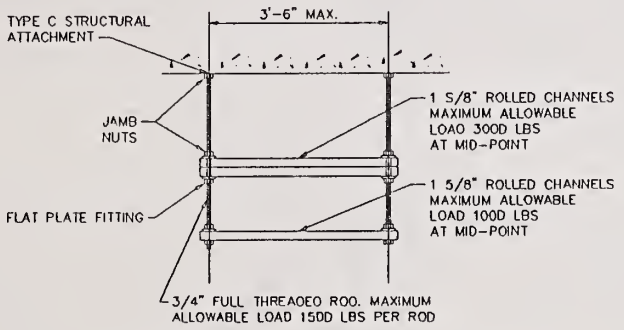
TYPE XI



TYPE XII

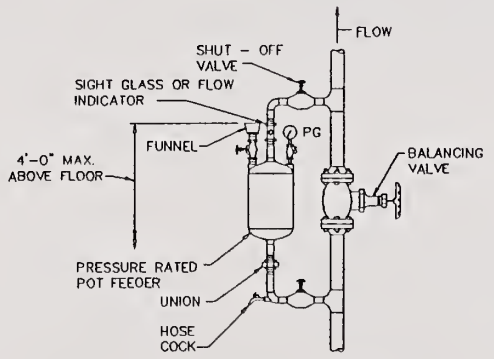
PIPE SUPPORT DETAILS (A)

NO SCALE



TRAPEZE PIPE HANGER DETAIL (C)

NO SCALE



CHEMICAL POT FEEDER DETAIL (B)

NO SCALE

NOTES: (PIPE SUPPORT SYSTEMS)

1. PIPE SUPPORT SYSTEMS ARE IDENTIFIED ON THE DRAWINGS AS FOLLOWS:
   C — STRUCTURAL ATTACHMENT
   VI — PIPE ATTACHMENT
2. MSS REFERS TO MANUFACTURERS STANDAROIZATION SOCIETY OF THE VALVE AND FITTING INDUSTRY, STANDARD PRACTICE SP 58 AND 69.
3. FITTINS SHALL NOT BE LESS THAN MSS CLB
4. ALL STRUCTURAL AND PIPE ATTACHMENTS, PIPE SUPPORT RACK ANO TRAPEZE PIPE HANGER COMPONENTS SHALL BE HOT OIP GALVANIZEO AFTER FABRICATION.
5. WHERE NO REFERENCE TO PIPE SUPPORT SYSTEMS IS GIVEN ON THE ORAWINGS THE CONTRACTOR SHALL USE AN APPROPRIATE SYSTEMS AS DIRECTED BY THE ENGINEER. SEE TABLE B.

MDDDD9DD
MARCH 26,1987

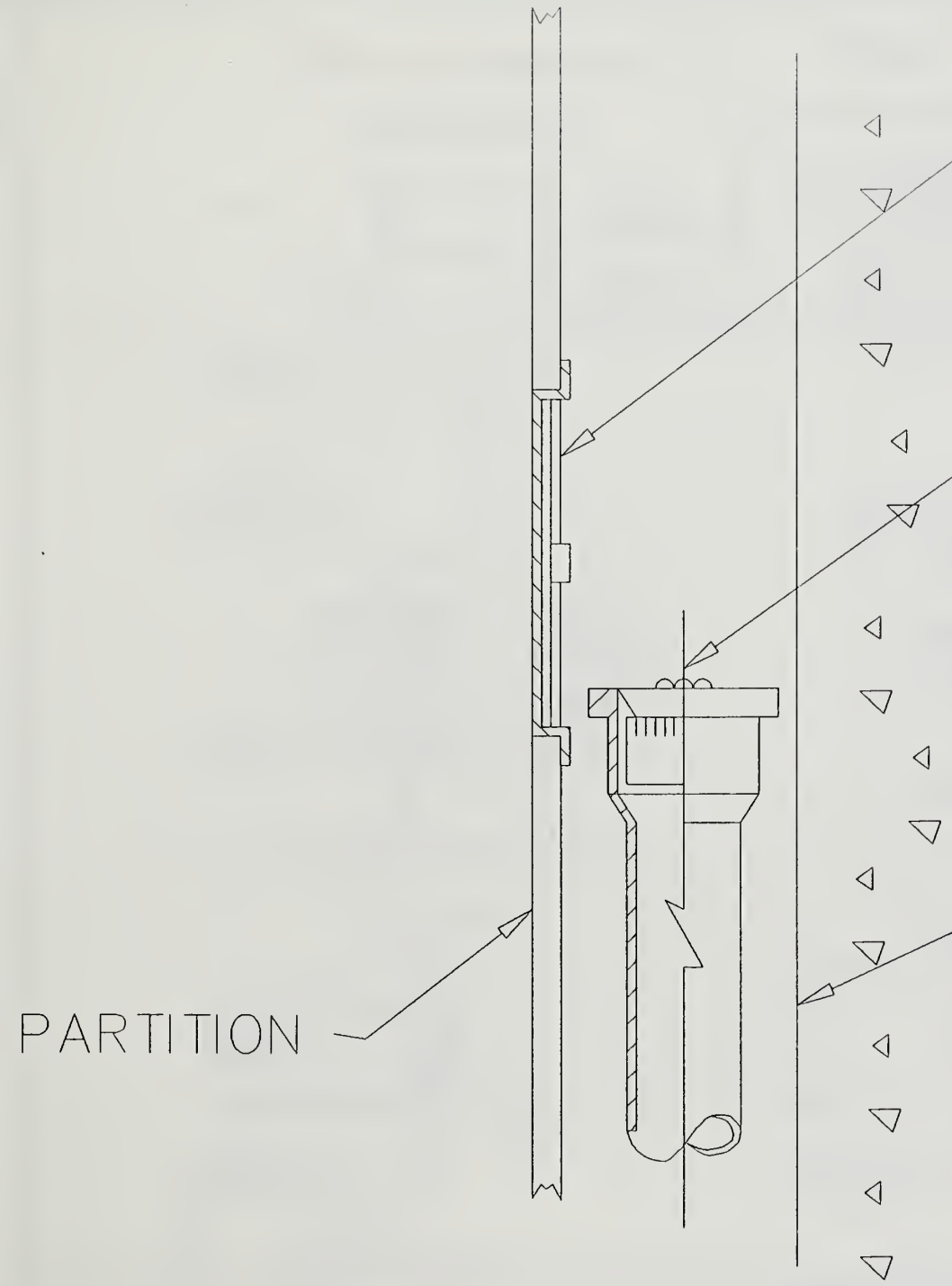
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THE PACIFIC NORTHWEST REGION

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MISC. PIPING OETAILS

SHT. ____ OF ____



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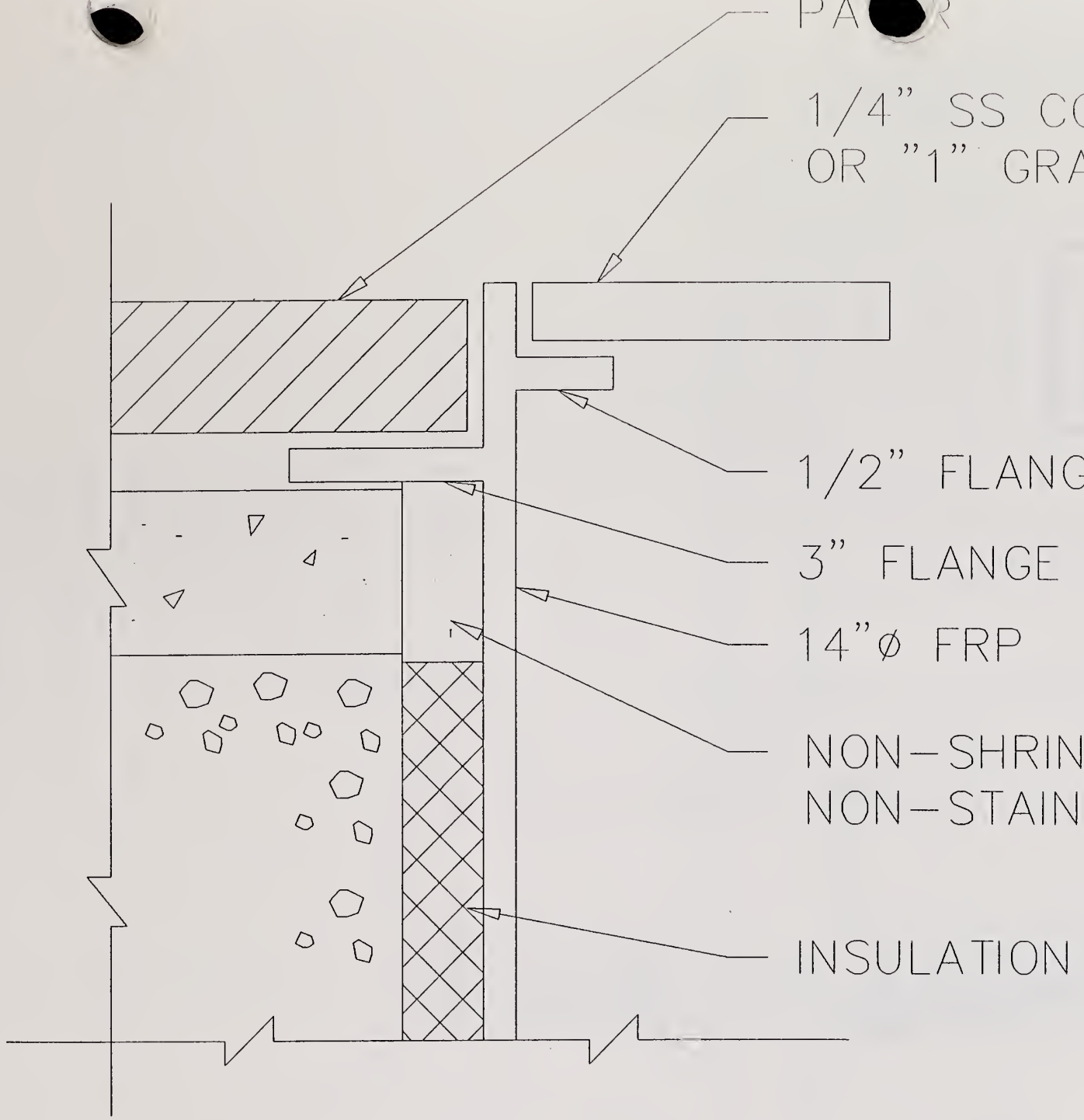
TYPE IV

3-29-88

M0000812

CLEANOUT WITH ACCESS
THROUGH WALL

THROUGH WALL



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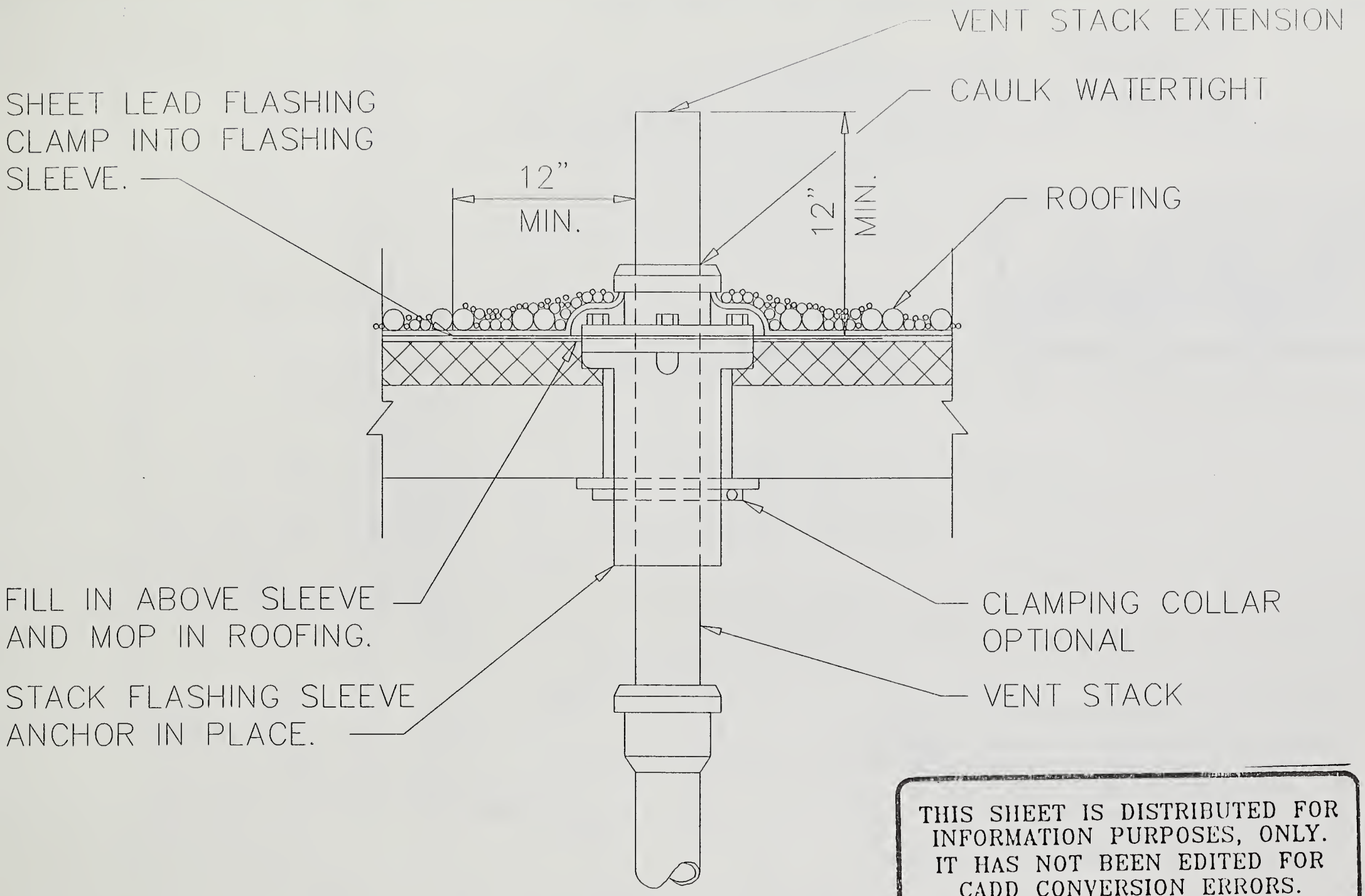
ICE SUMP DETAIL

F

3-29-88

NO SCALE

M0000811



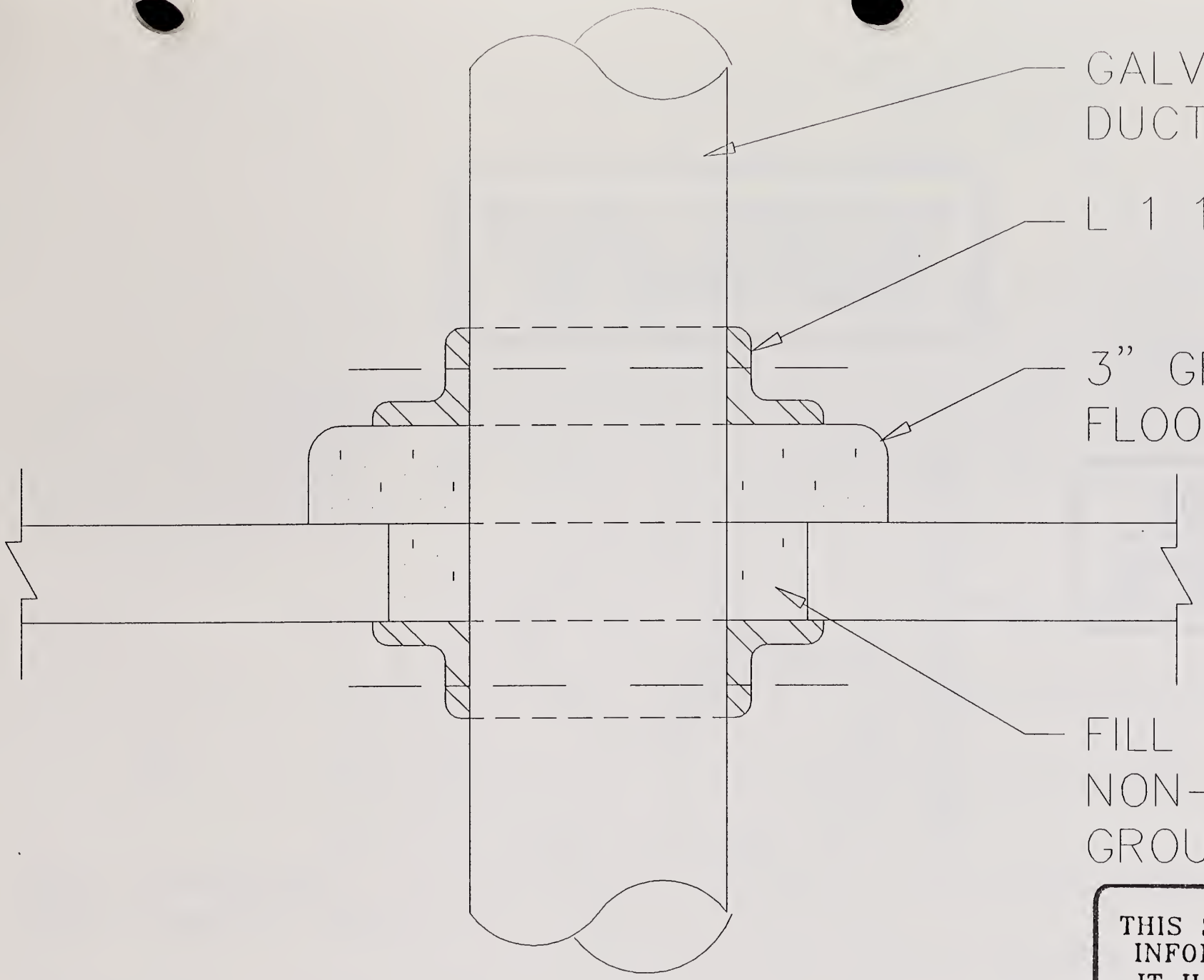
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VENT STACK THRU ROOF

3-29-88

NO SCALE

M0[illegible]810



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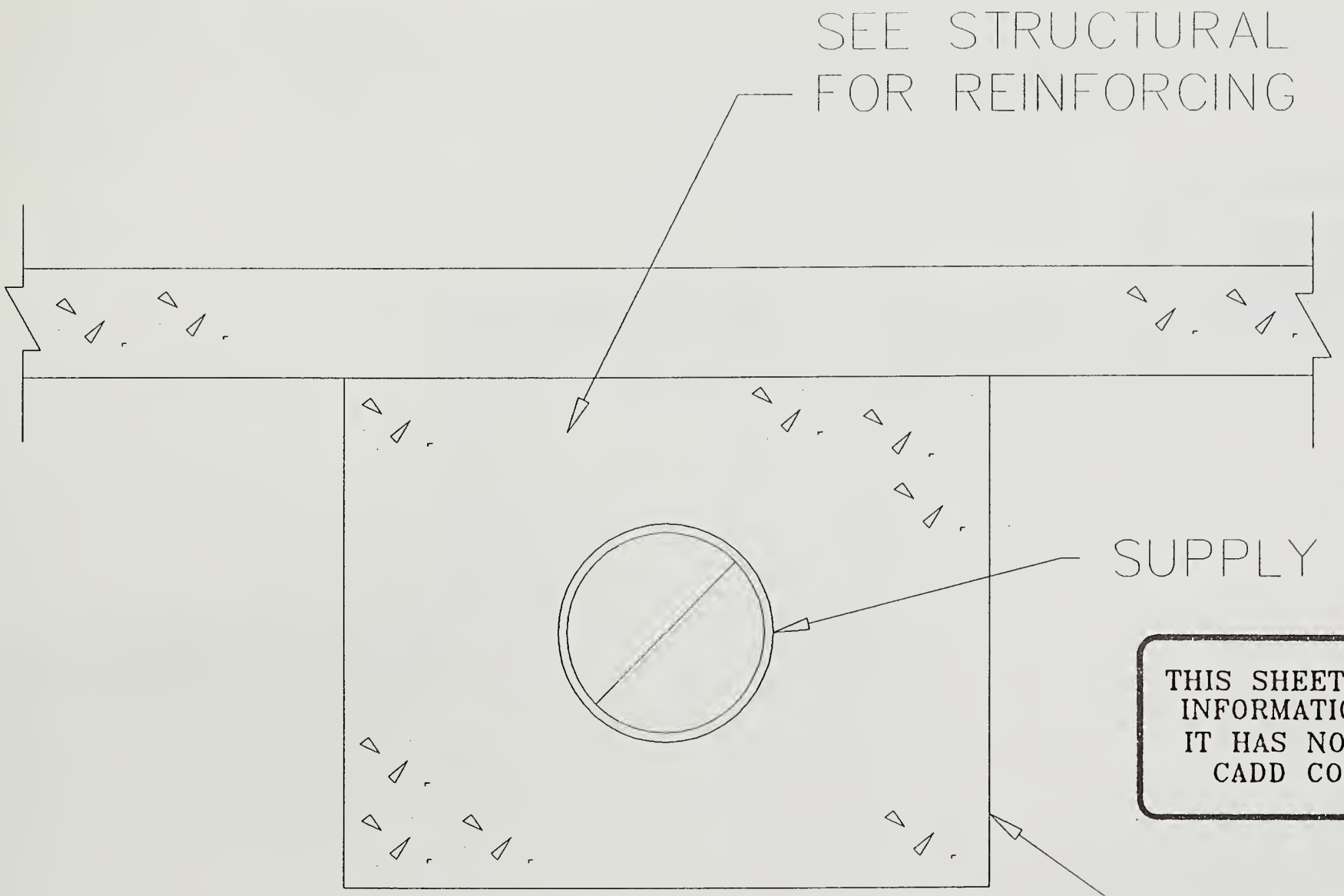
DUCT PENETRATION

D

3-29-88

NO SCALE

M0000809



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DUCT UNDER SLAB

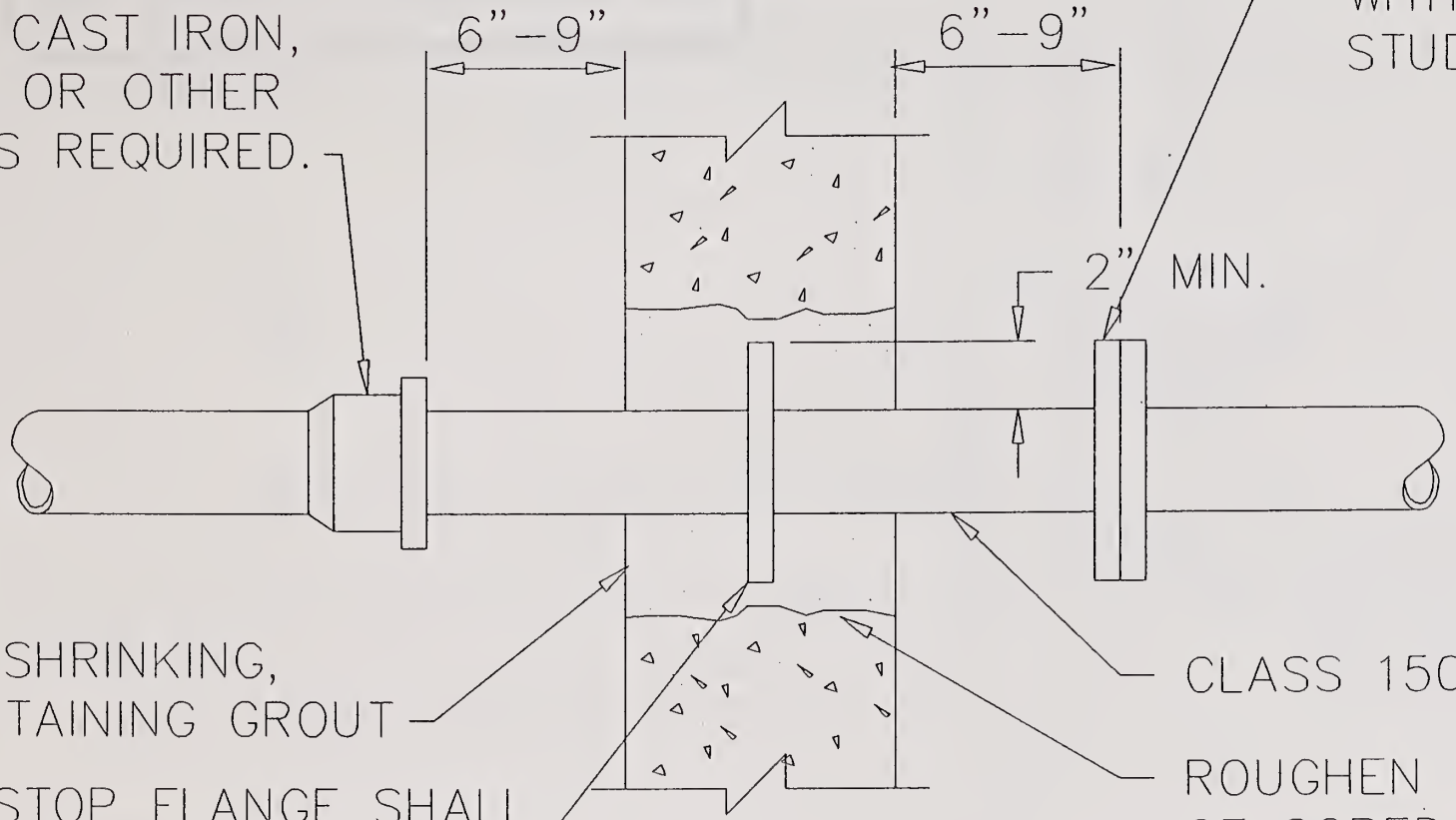
NO SCALE

C

3-29-88

M0000808

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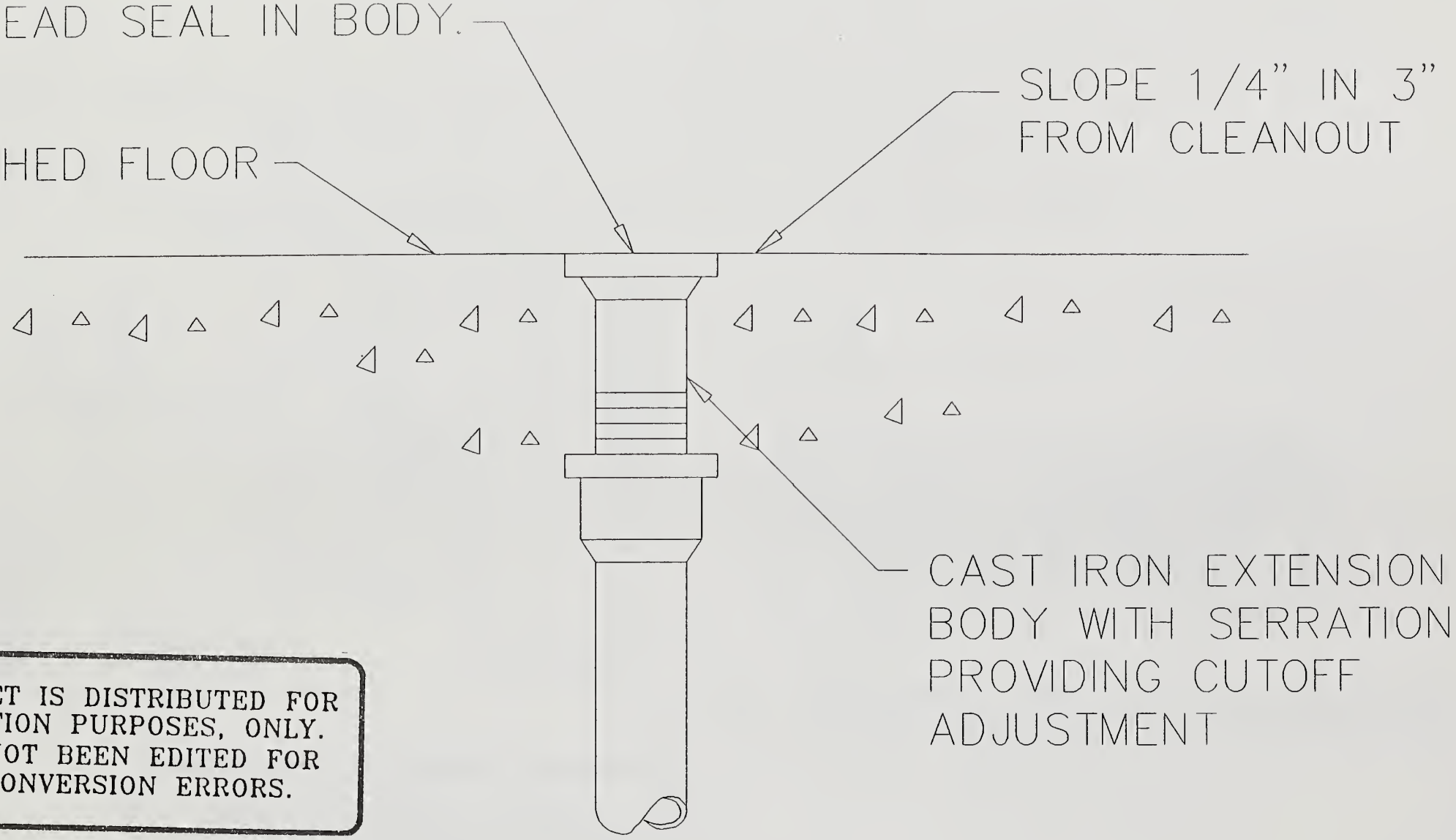
TYPE E

FOR WALLS

M0000807

3–29–88

ALL CLEANOUTS IN FINISHED FLOOR SHALL HAVE NICKEL, BRONZE ACCESS COVER, ADJUSTABLE FRAME AND LEAD SEAL IN BODY.



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TYPE II

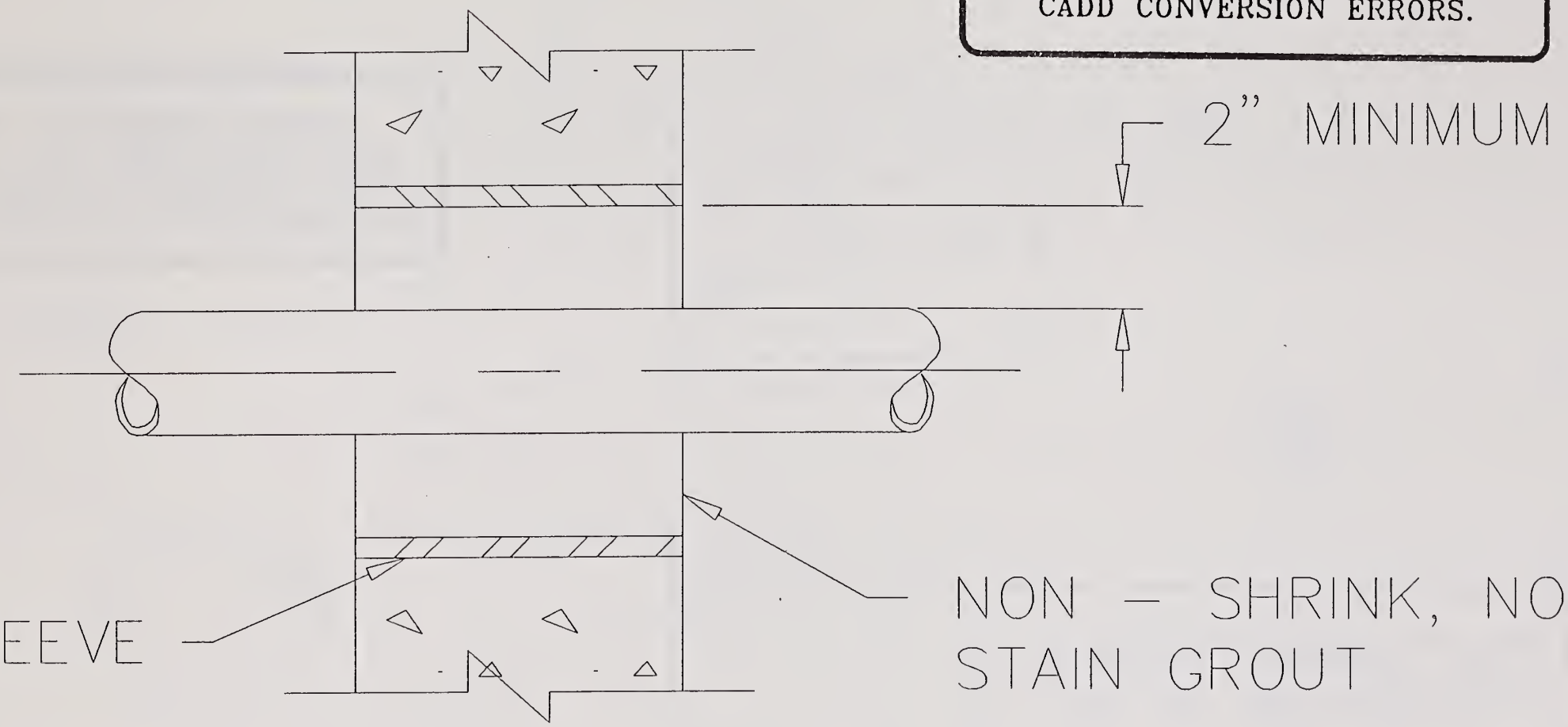
3-29-88

M0000806

CLEANOUT IN FINISHED FLOOR OR WALKWAY

CLEANOUT IN FINISHED FLOOR
OR WALKWAY

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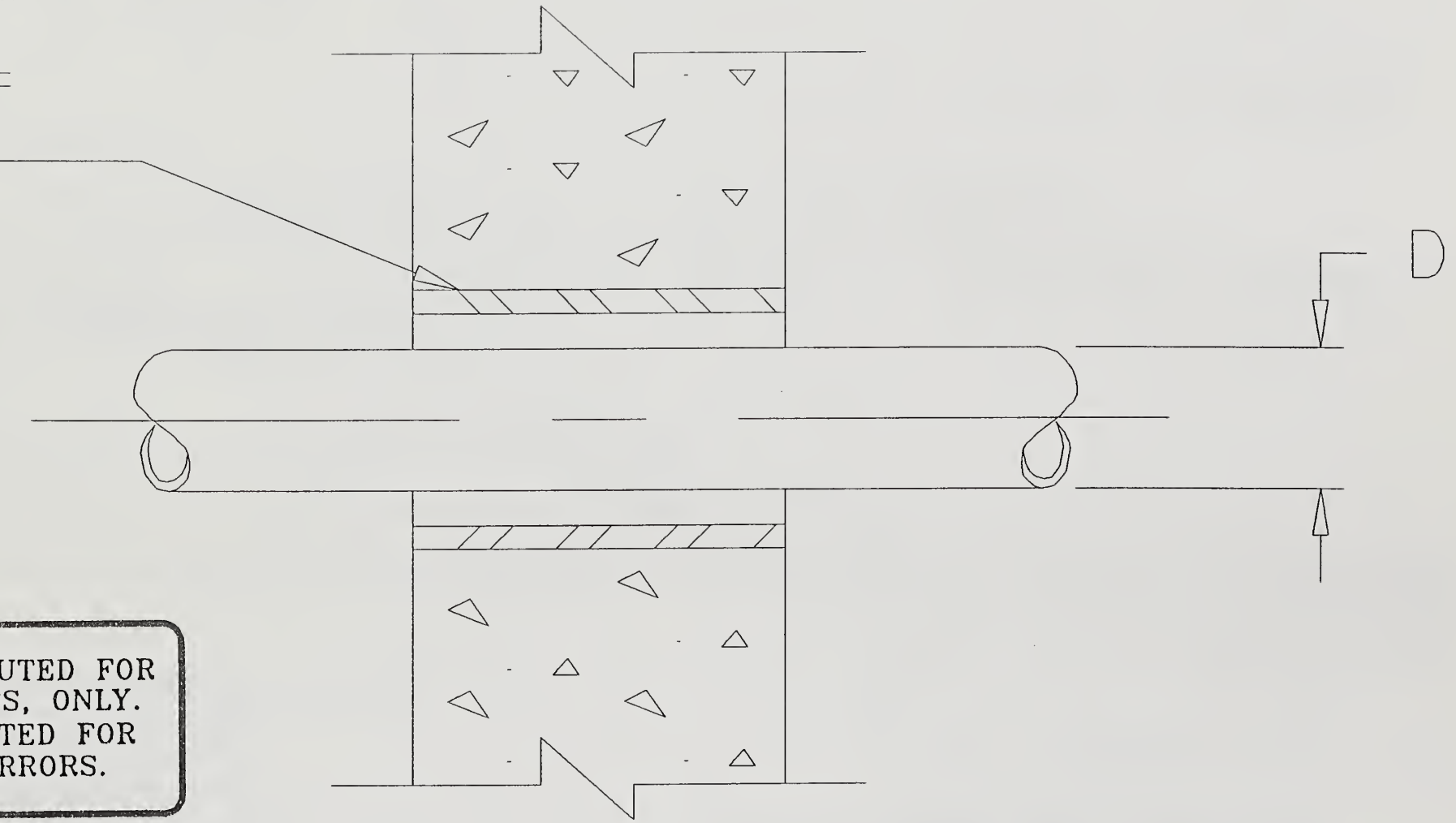
TYPE D

FOR WALLS
NO SCALE

M0000805

3–29–88

PIPE SLEEVE -
MINIMUM I.D. =
D + 1"



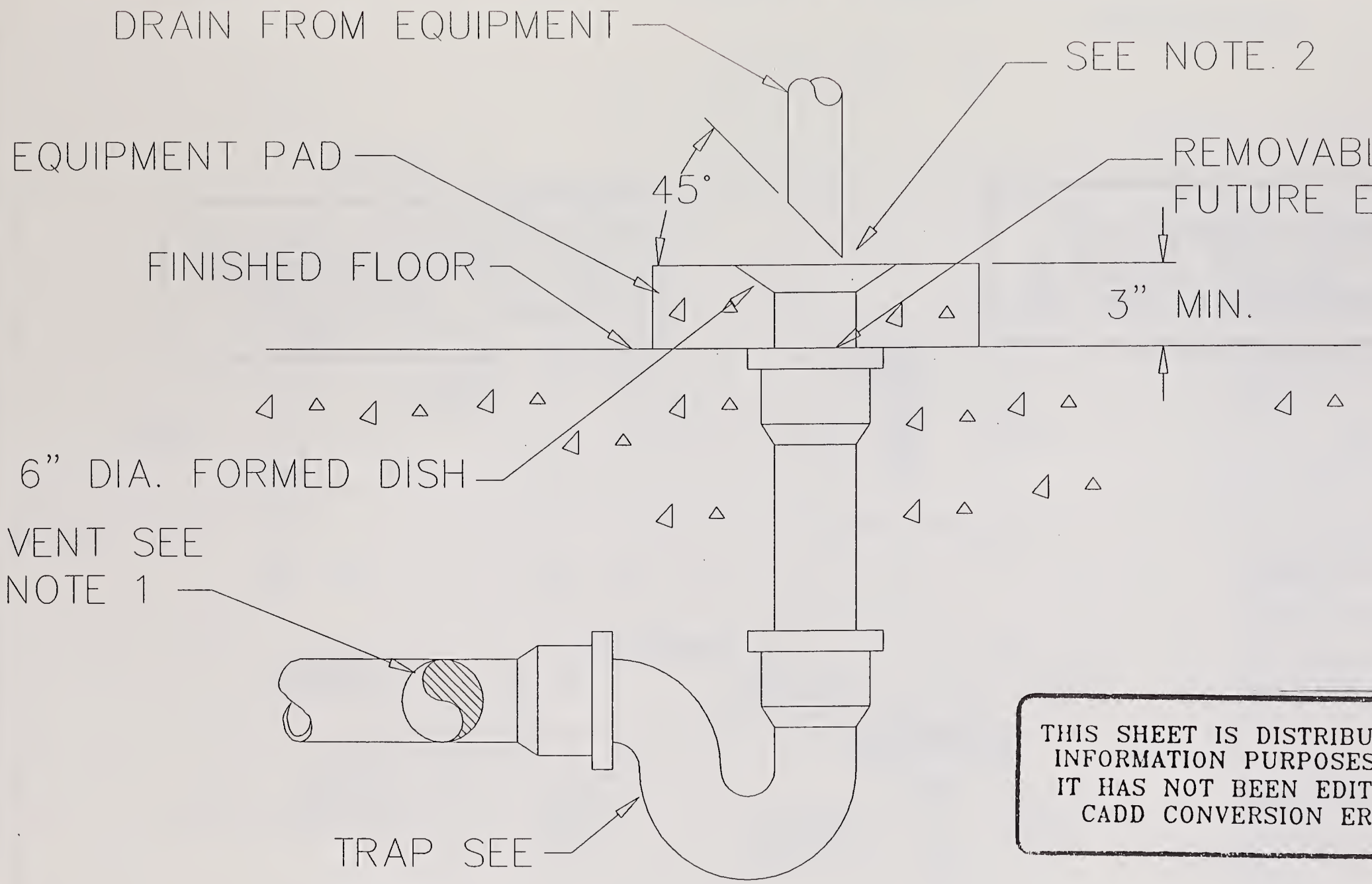
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CADD CONVERSION ERRORS.

TYPE C

FOR WALLS
NO SCALE

3-29-88

M0000804



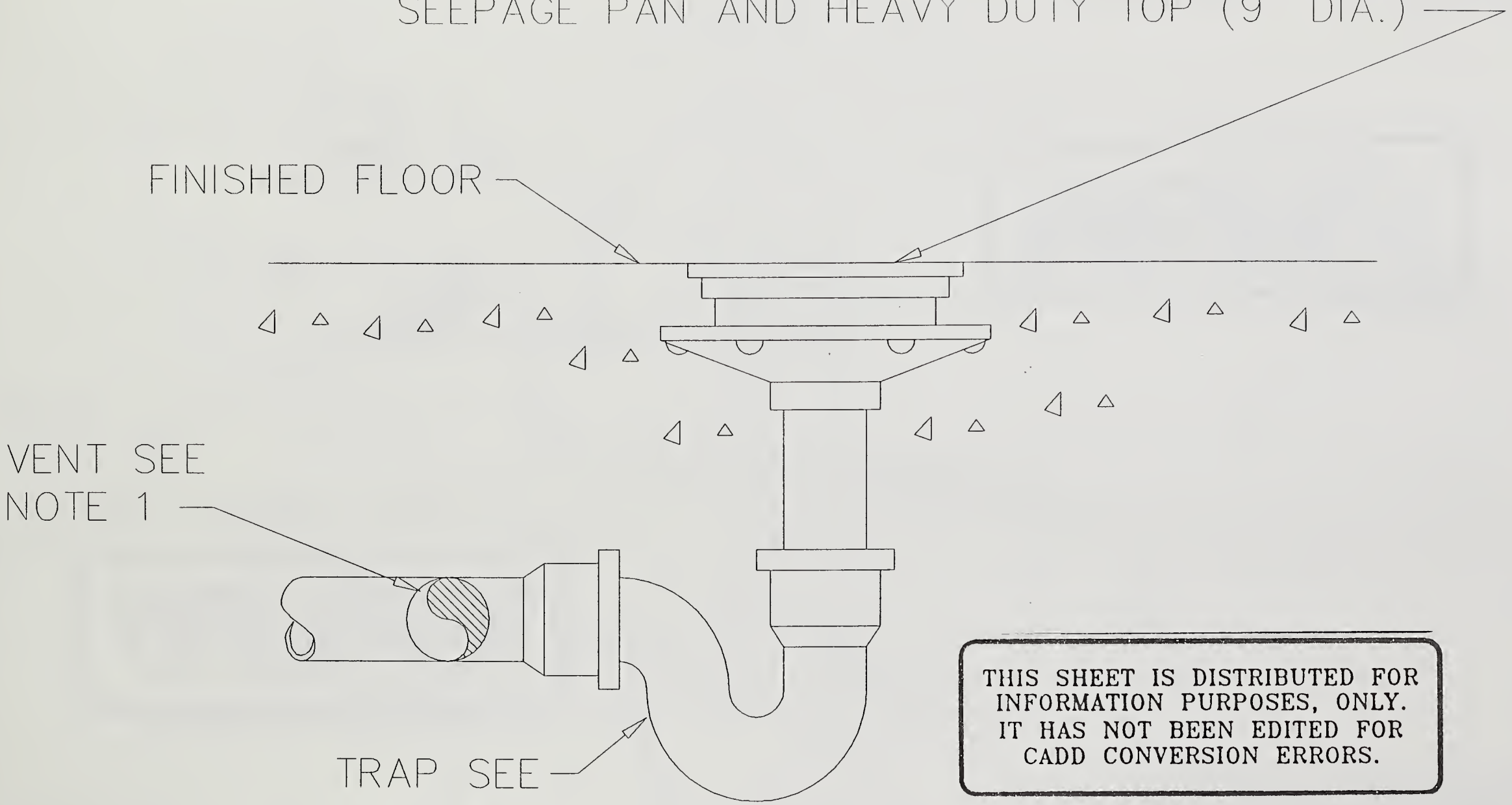
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TYPE III

M0000803 3-29-88

EQUIPMENT PAD DRAIN
NO SCALE

FLOOR DRAIN – CONTINUOUS FLOW SOLID – RETAINING SHALLOW TYPE WITH INTERGRAL SEEPAGE PAN AND HEAVY DUTY TOP (9" DIA.)



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TYPE I

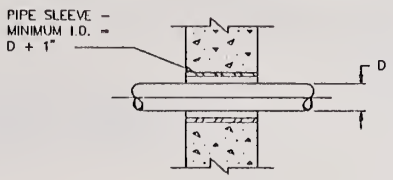
FLOOR DRAIN
NO SCALE

M0000802

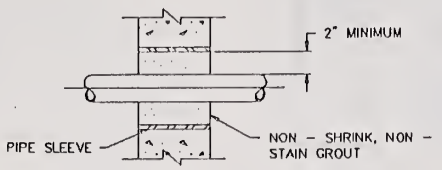
3-29-88

NO SCALE

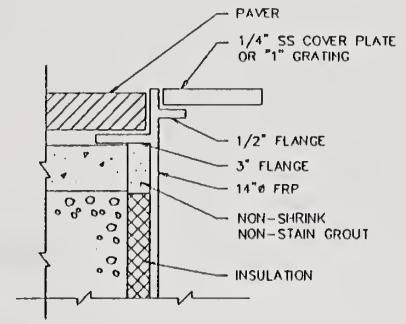
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TYPE C
FOR WALLS
NO SCALE
M0000804



TYPE D
FOR WALLS
NO SCALE
M0000805



ICE SUMP DETAIL (F)
NO SCALE
M0000811

PIPE PENETRATION SCHEDULE FOR FLOORS, WALLS, CEILINGS

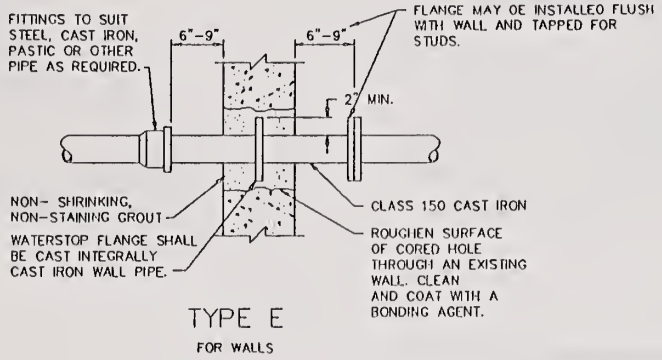
CONDITION			PENETRATION TYPE		
NO.	FROM	TO	STEEL	CAST IRON	PLASTIC
1	WET OR DRY	WET	A B E	A E	A E
2	ORY	ORY	C F H NOTE 4 FOR DEG	C F H NOTE 4 FOR OEG	C F H NOTE 4 FOR E
3	DRY	OUTSIDE WALL	D E NOTE 5	D E NOTE 5	E NOTE 5
4	DRY	ROOF	AS SHOWN ON DRAWINGS OR AS SPECIFIED		

NOTES (PIPE PENETRATION SCHEDULE)

1. IN SCHEDULE "WET" SHALL BE ANY PART OF A STRUCTURE LOWER THAN THE MAXIMUM LIQUID SURFACE INDICATED ON THE DRAWINGS OR ANY PART OF A STRUCTURE IN CONTACT WITH THE GROUND.
2. IN SCHEDULE "DRY" SHALL BE ANY PART OF THE INTERIOR WALLS OF A STRUCTURE, PASSAGE OR ANY ENCLOSED AIR SPACE NOT NORMALLY SUBJECTED TO FLOODING.
3. IN SCHEDULE "OUTSIDE WALL" SHALL BE ANY PART OF THE EXTERIOR WALLS EXPOSED TO THE ATMOSPHERE.
4. IN CONDITION NO.2 USE DETAILS D, E OR G WHEN ONE SIDE IS CLASSIFIED AN EXPLOSION HAZARDOUS AREA, CONTAINS EXPLOSION-PROOF EQUIPMENT OR WHEN FLOODING IS POSSIBLE.
5. WATER STOP RINGS MAY BE OMITTED.

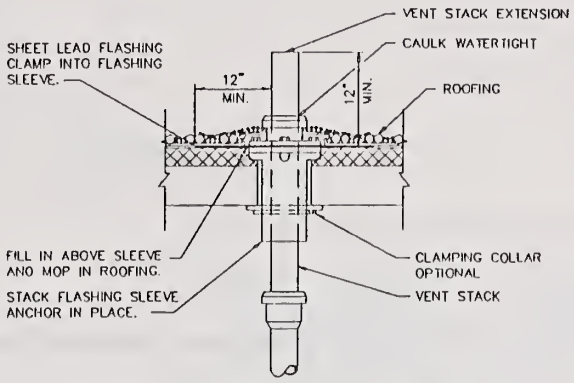
NOTES (PIPE PENETRATIONS)

1. WHERE PIPES PASS THROUGH CONCRETE WALLS, FLOORS OR CEILINGS, THE METHOD USED SHALL CONFORM TO THE PIPE PENETRATION SCHEDULE EXCEPT WHERE SPECIAL DETAILS ARE SHOWN OR NOTED ON DRAWINGS.
2. EXCEPT WHERE NOTED, ALL SLEEVES SHALL BE SCHEDULE 10 STEEL PIPE MINIMUM GALVANIZED AFTER FABRICATION. SLEEVES WITH ENDS EXPOSED TO WEATHER WILL BE STAINLESS STEEL.
3. USE SCHEDULE 80 PLASTIC PIPE WALL PIECE WHEN CONNECTED PIPE IS PLASTIC.
4. EXTEND PIPE INSULATION OR CORROSION PROTECTIVE COVERING MATERIAL THROUGH WALL SLEEVE. PIPE WALL SLEEVES SHALL BE SUITABLY SIZED.



TYPE E
FOR WALLS

PENETRATION DETAILS (B)
NO SCALE
M0000807



VENT STACK THRU ROOF (E)
NO SCALE
M0000810

M0000801
MARCH 20,1987

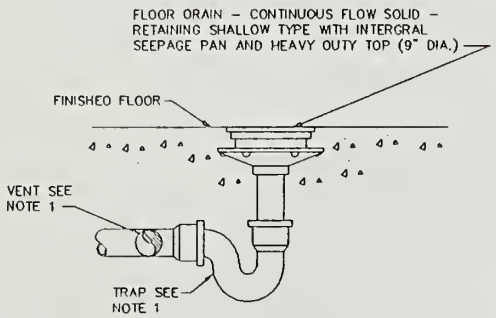
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

DRAWN ____ DATE ____
DESIGNED ____ DATE ____
CHECKED ____ DATE ____
REVIEWED ____ DATE ____

MISC. PIPING DETAILS

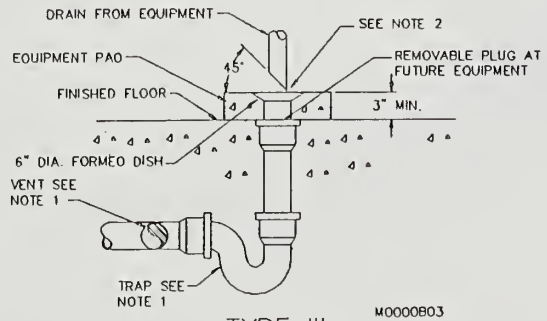
SHT. ____
OF ____

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TYPE I M0000802

FLOOR DRAIN



TYPE III M0000803

EQUIPMENT PAD DRAIN

PIPE PENETRATION SCHEDULE FOR FLOORS, WALLS, CEILINGS

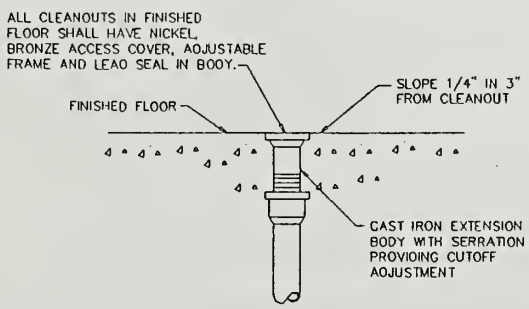
CONDITION			PENETRATION TYPE		
NO.	FROM	TO	STEEL	CAST IRON	PLASTIC
1	WET OR DRY	WET	A B E	A E	A E
2	DRY	DRY	C F H NOTE 4 FOR DEG	C F H NOTE 4 FOR DEG	C F H NOTE 4 FOR E
3	DRY	OUTSIDE WALL	D E NOTE 5	D E NOTE 5	E NOTE 5
4	DRY	ROOF	AS SHOWN ON DRAWINGS OR AS SPECIFIED		

NOTES (PIPE PENETRATION SCHEDULE)

1. IN SCHEDULE "WET" SHALL BE ANY PART OF A STRUCTURE LOWER THAN THE MAXIMUM LIQUID SURFACE INDICATED ON THE DRAWINGS OR ANY PART OF A STRUCTURE IN CONTACT WITH THE GROUND.
2. IN SCHEDULE "DRY" SHALL BE ANY PART OF THE INTERIOR WALLS OF A STRUCTURE, PASSAGE OR ANY ENCLOSED AIR SPACE NOT NORMALLY SUBJECTED TO FLOODING.
3. IN SCHEDULE "OUTSIDE WALL" SHALL BE ANY PART OF THE EXTERIOR WALLS EXPOSED TO THE ATMOSPHERE.
4. IN CONDITION NO.2 USE DETAILS D, E OR G WHEN ONE SIDE IS CLASSIFIED AN EXPLOSION HAZARDOUS AREA, CONTAINS EXPLOSION-PROOF EQUIPMENT OR WHEN FLOODING IS POSSIBLE.
5. WATER STOP RINGS MAY BE OMITTED.

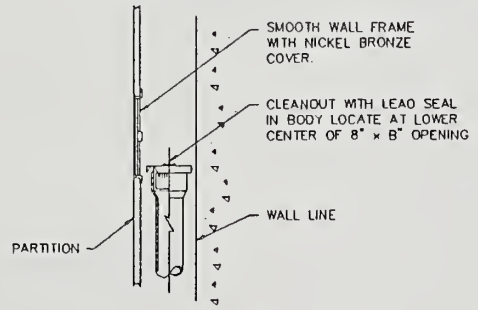
NOTES (PIPE PENETRATIONS)

1. WHERE PIPES PASS THROUGH CONCRETE WALLS, FLOORS OR CEILINGS, THE METHOD USED SHALL CONFORM TO THE PIPE PENETRATION SCHEDULE EXCEPT WHERE SPECIAL DETAILS ARE SHOWN OR NOTED ON DRAWINGS.
2. EXCEPT WHERE NOTED, ALL SLEEVES SHALL BE SCHEDULE 10 STEEL PIPE MINIMUM GALVANIZED AFTER FABRICATION. SLEEVES WITH ENDS EXPOSED TO WEATHER WILL BE STAINLESS STEEL.
3. USE SCHEDULE 80 PLASTIC PIPE WALL PIECE WHEN CONNECTED PIPE IS PLASTIC.
4. EXTEND PIPE INSULATION OR CORROSION PROTECTIVE COVERING MATERIAL THROUGH WALL SLEEVE. PIPE WALL SLEEVES SHALL BE SUITABLY SIZED.



TYPE II M0000806

CLEANOUT IN FINISHED FLOOR OR WALKWAY

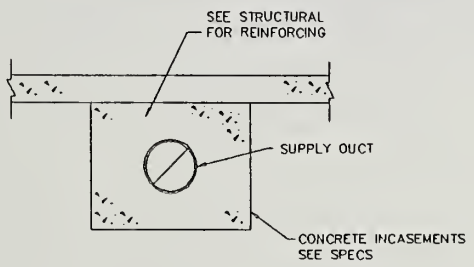


TYPE IV M0000812

CLEANOUT WITH ACCESS THROUGH WALL

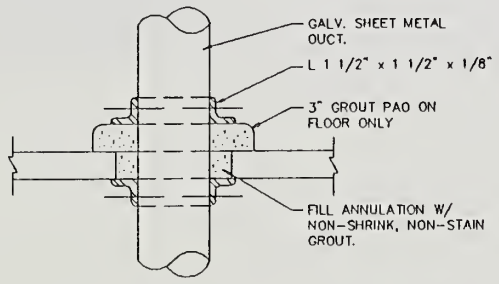
FLOOR DRAINS (A)

NO SCALE



DUCT UNDER SLAB (C)

NO SCALE M0000808



DUCT PENETRATION (D)

NO SCALE M0000809

M0000800
MARCH 20,1987

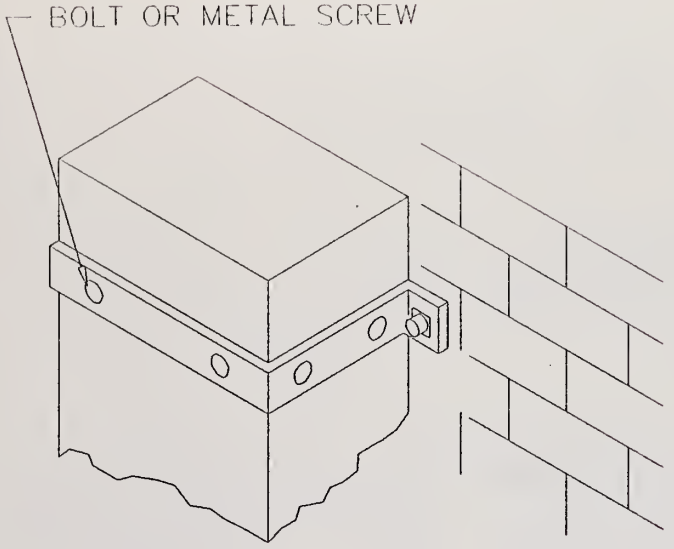
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DRAWN DATE
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

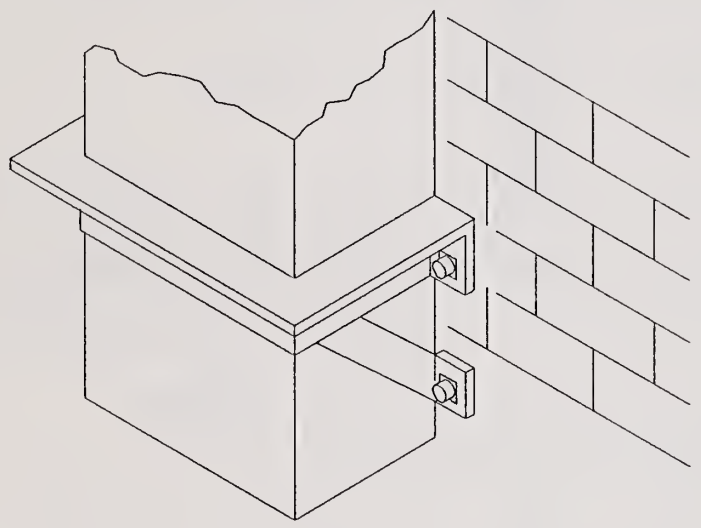
MISC. PI ...GS

SHT.
OF



METAL STRAP

MAX. SIDE OF DUCT	SUPPORT	VERTICAL SPACING
TO 24"	1" x 1/8" STRAP	12'-0" O.C.
OVER 24"	1" x 1" x 1/8" ANGLE	12'-0" O.C.
OVER 36"	1 1/8" x 1 1/8" x 1/8" ANGLE	12'-0" O.C.
OVER 48"	1 1/2" x 1 1/2" x 1/8" ANGLE	12'-0" O.C.
OVER 60"	2" x 2" x 1/8" ANGLE	12'-0" O.C.

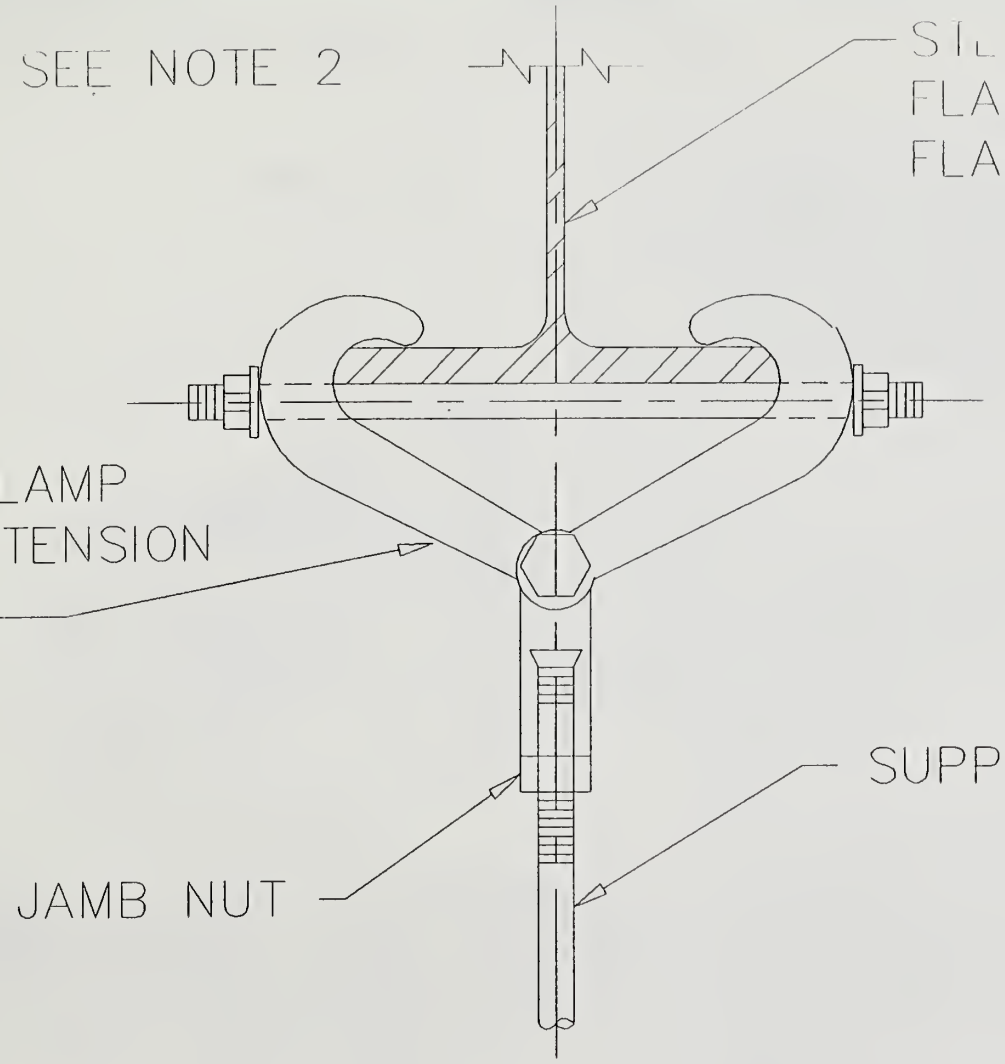


METAL ANGLE

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VERTICAL DUCT SUPPORT

NO SCALE M0000708 3-29-88



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CAPACITY: 3/8" THROUGH 10" PIPE

MAXIMUM ALLOWABLE LOAD:

3/8" ROD	610 LBS
1/2" ROD	1130 LBS
5/8" – 7/8" RODS	1365 LBS

TYPE E

M00C[illegible]07 3-29-88

NOTE:

BRACKET MAY BE USED WITH
VARIOUS HANGER, ROLLER, GUIDE
U-CLAMP AND ANCHOR ASSEMBLIES.

WELDED STEEL BRACKET
SIZE AS REQUIRED

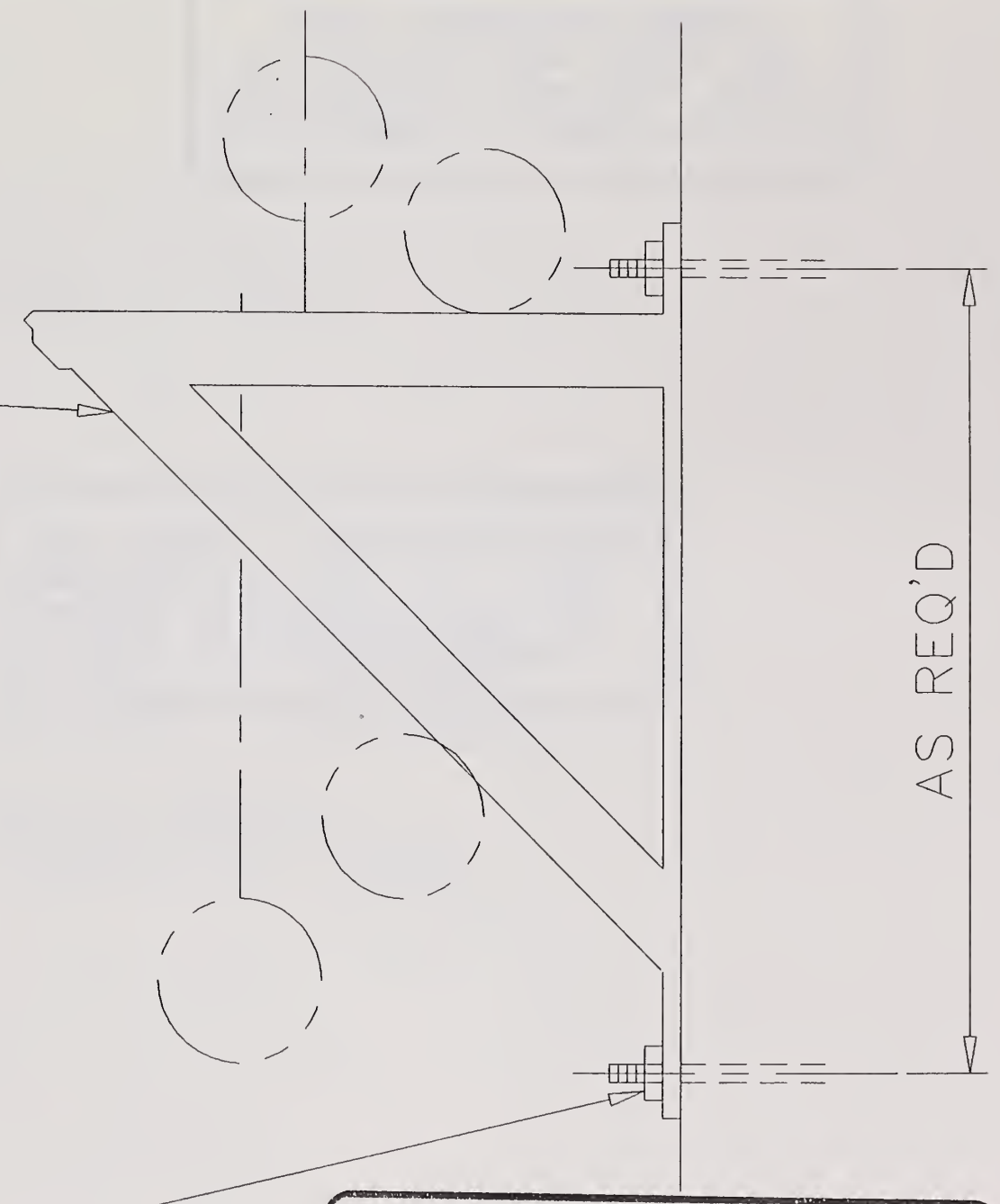
CAPACITY: 3/8" THROUGH
12" PIPE

MAXIMUM ALLOWABLE LOAD

1500 - 3000 LBS

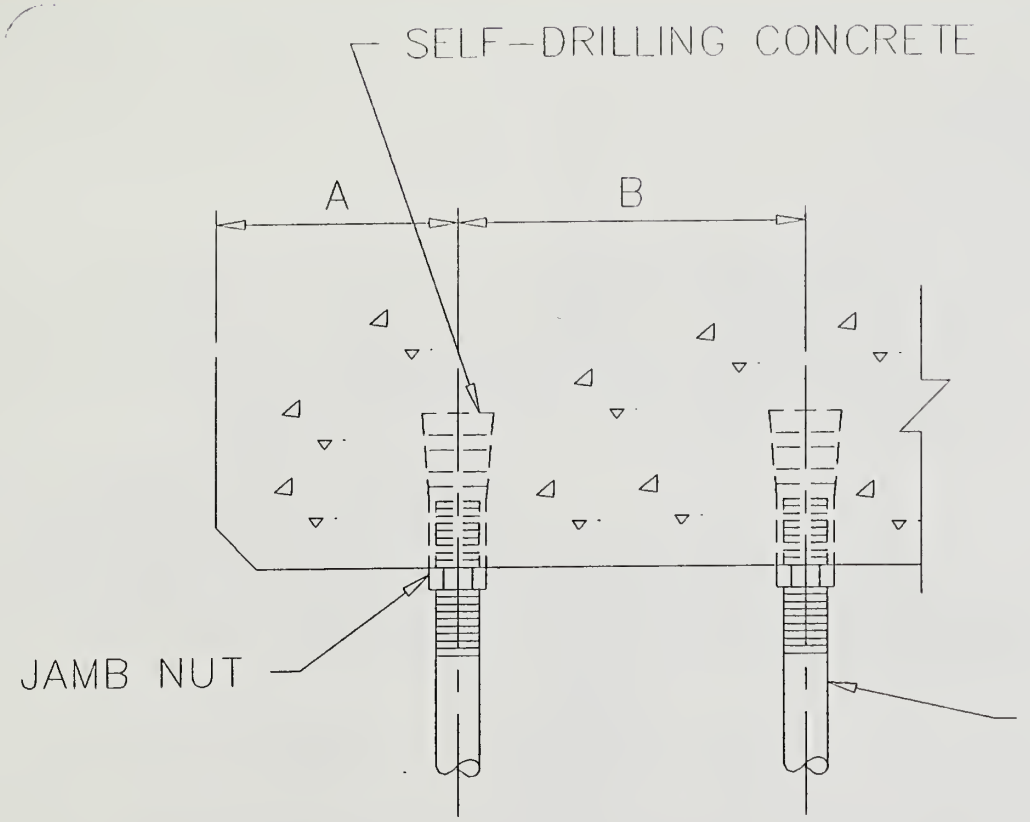
USE DESIGN WEIGHTS SHOWN
IN TABLE A TO DETERMINE
TOTAL LOAD

ANCHOR BOLTS OR TYPE A THROUGH
TYPE C STRUCTURAL ATTACHMENTS



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TYPE K



CAPACITY: 3/8" PIPE THROUGH 12" PIPE

MAXIMUM ALLOWABLE LOAD:

3/8" ROD	610 LBS
1/2" ROD	1130 LBS
5/8" ROD	1810 LBS
3/4" ROD	2550 LBS
7/8" ROD	2630 LBS

SEE TABLE A AND TYPICAL SUPPORT ROD FOR PIPES SUBJECT TO HORIZONTAL MOVEMENT DETAIL.

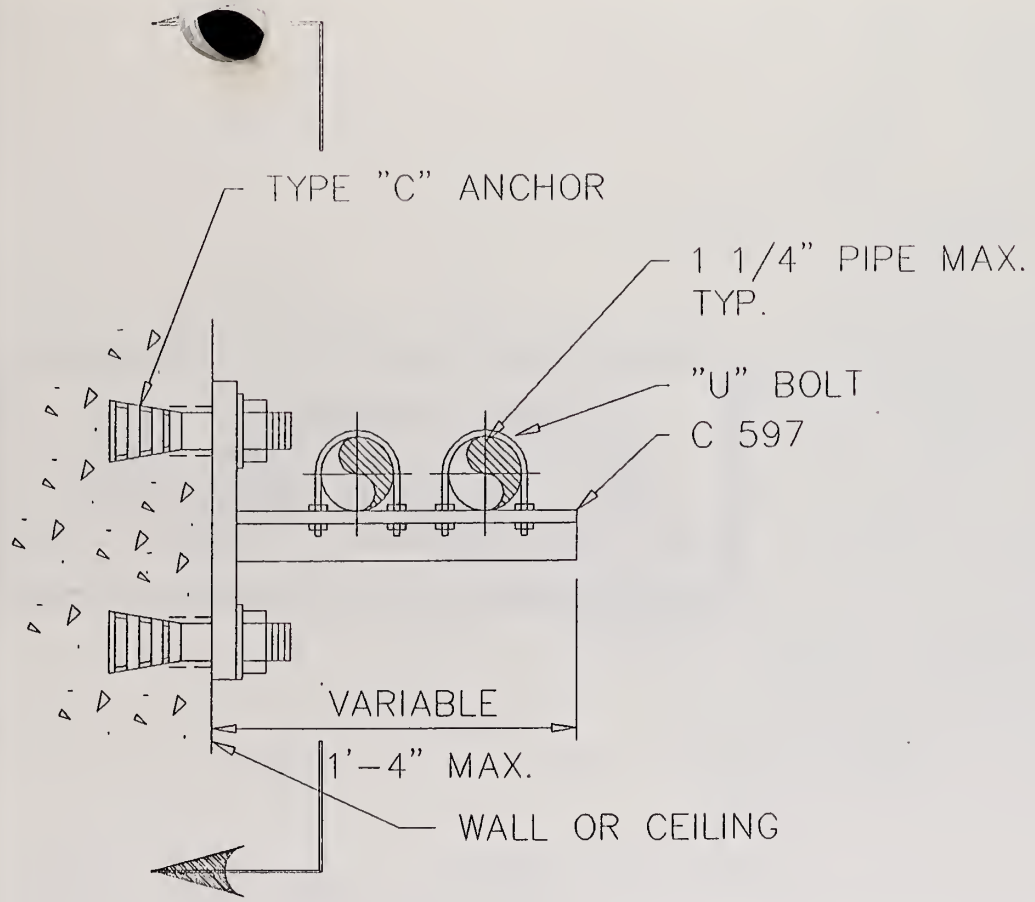
MINIMUM SPACING: A = EDGE DISTANCE, B = CENTER TO CENTER

3/8" ROD	3"	4"
1/2" ROD	4"	5"
5/8" ROD	4"	6"
3/4" ROD	5"	7"
7/8" ROD	6"	8"

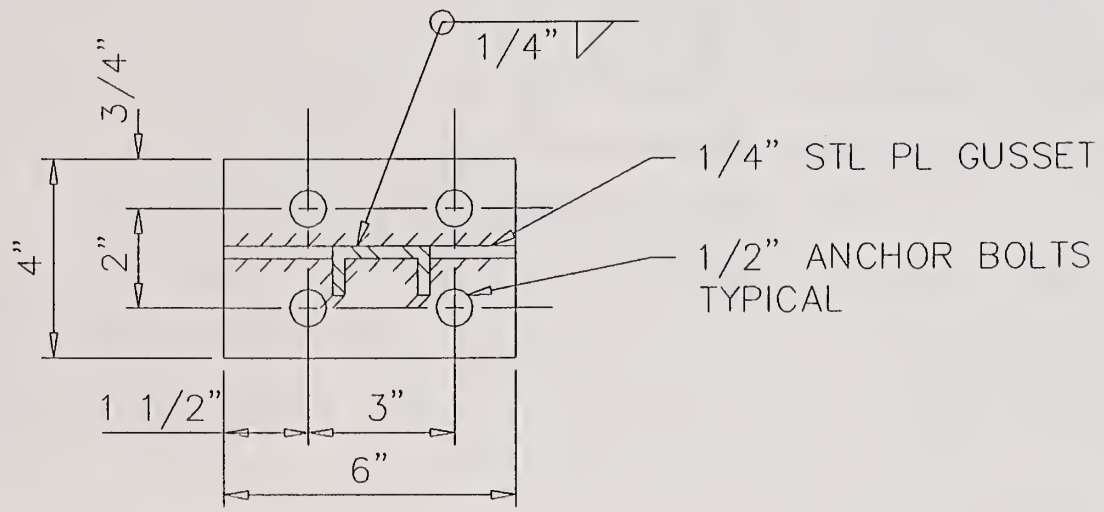
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TYPE C

M00[illegible]05 3-29-88



ELEVATION

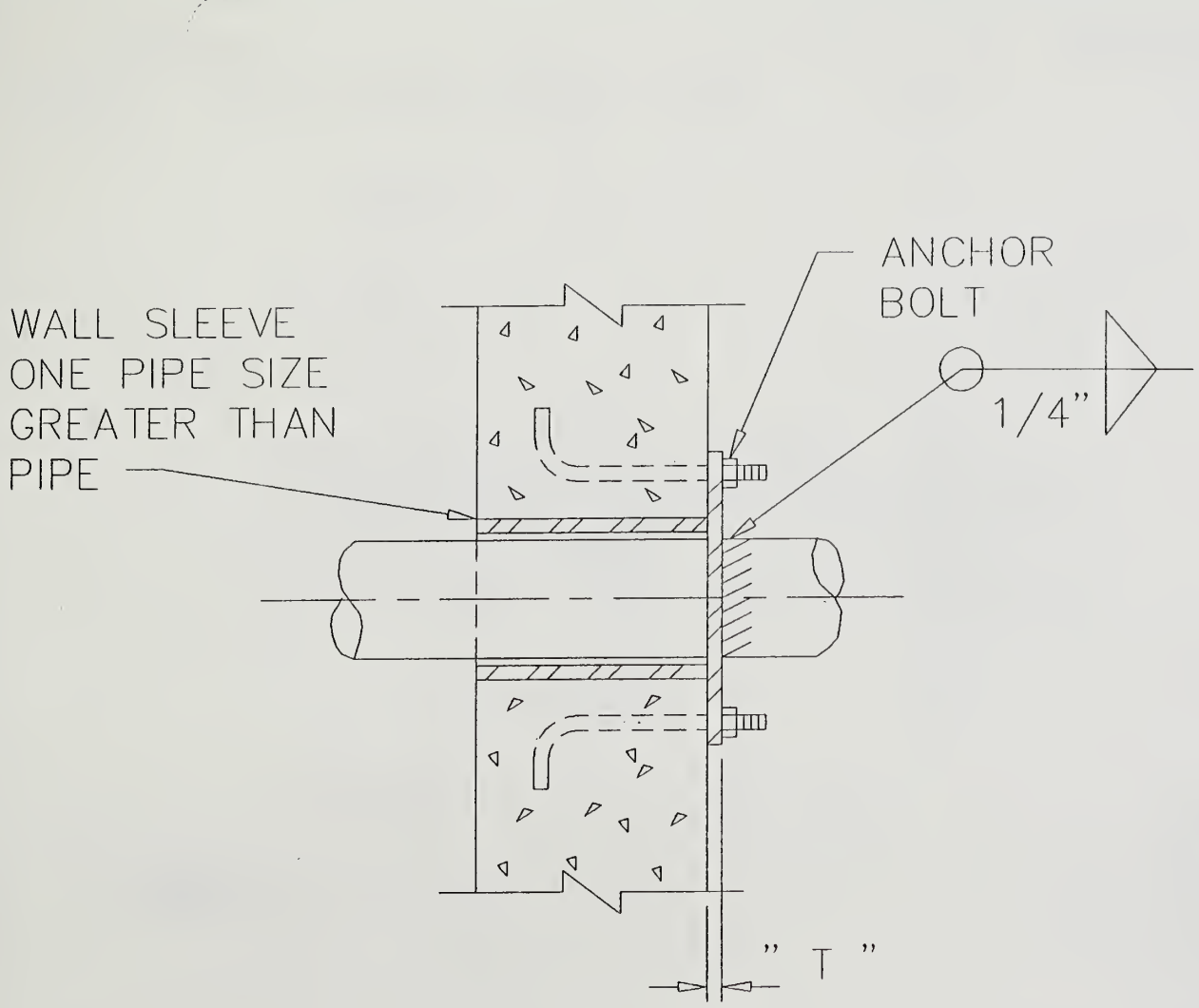


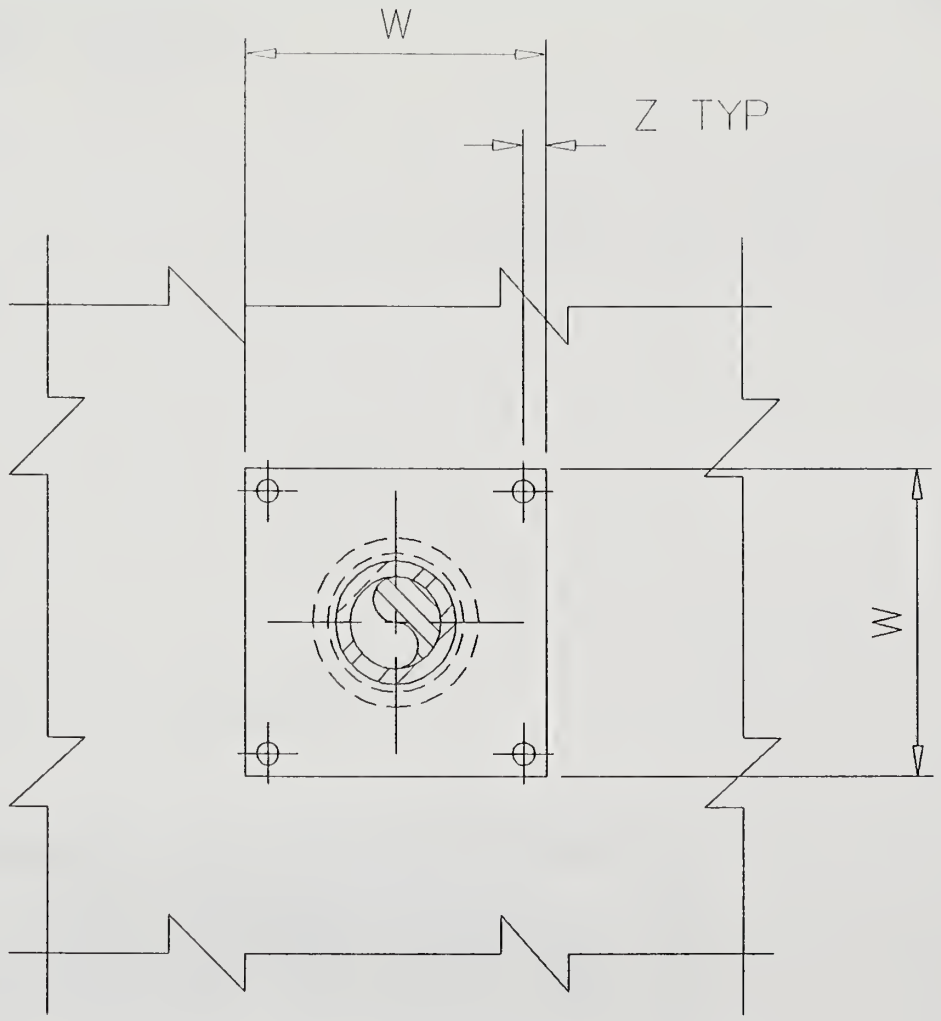
SECTION

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PIPE ANCHOR DETAIL B

NO SCALE





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				ANCHOR BOLTS

PIPE ANCHOR THRU WALL OR CEILING DETAIL

A

NO SCALE

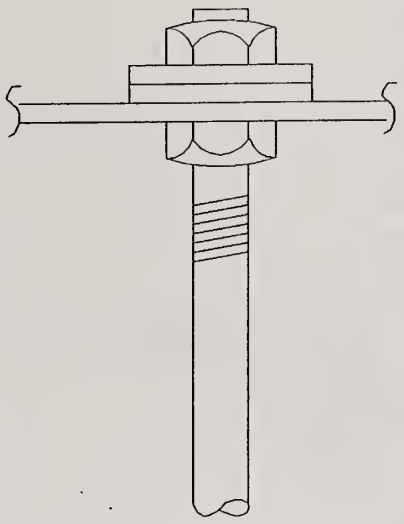
3-28-88

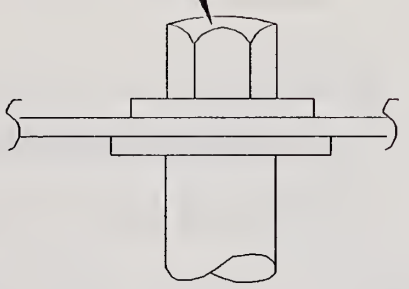
M0000703

NO SCALE

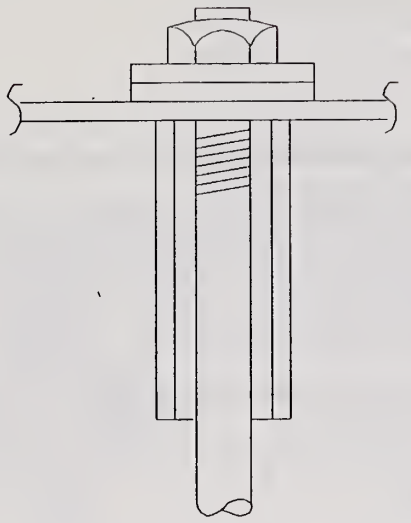
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M0000703





TUBE WITH THREADED INSERTS
(B)

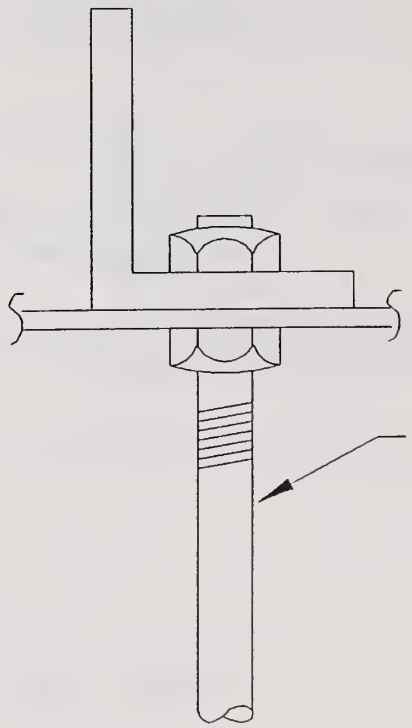


WITH SPACERS
(C)

WITH INTERNAL AND EXTERNAL NUTS
(A)

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METHODS OF ATTACHING RODS TO THE DUCT WALL OR TO A REINFORCEMENT AND THE DUCT WALL USING LOCK NUTS. WHEN A REINFORCEMENT IS PRESENT THE ROD MAY NOT ATTACH TO THE DUCT WALL ALONE.

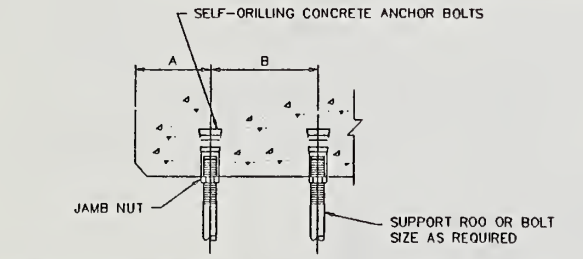


ROD DETAILS

3-28-88

M0000702

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SEE TABLE A AND TYPICAL SUPPORT ROO FOR PIPES SUBJECT TO HORIZONTAL MOVEMENT DETAIL.

CAPACITY: 3/B" PIPE THROUGH 12" PIPE

MAXIMUM ALLOWABLE LOAD:

3/B" ROD	610 LBS
1/2" ROO	1130 LBS
5/8" ROD	1810 LBS
3/4" ROD	255D LBS
7/B" ROD	2630 LBS

MINIMUM SPACING: A = EDGE DISTANCE, B = CENTER TO CENTER

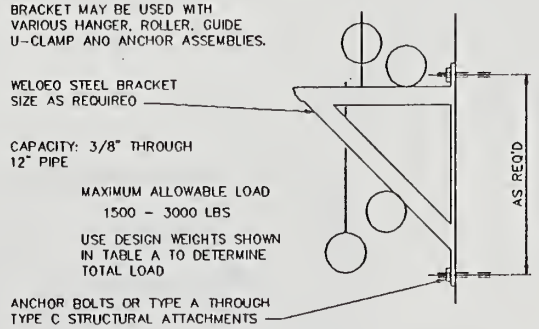
3/8" ROD	3"	4"
1/2" ROD	4"	5"
5/8" ROD	4"	6"
3/4" ROD	S"	7"
7/B" ROD	6"	B"

M0000705

TYPE C

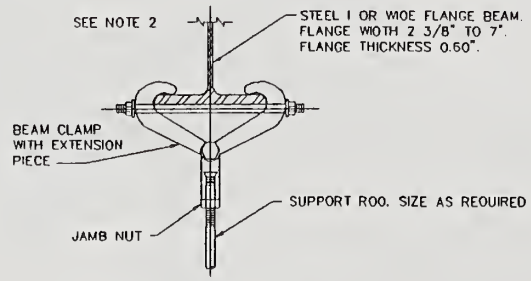
NOTE:

BRACKET MAY BE USED WITH VARIOUS HANGER, ROLLER, GUIDE U-CLAMP ANO ANCHOR ASSEMBLIES.



TYPE K

M00007D8



CAPACITY: 3/B" THROUGH 10" PIPE

MAXIMUM ALLOWABLE LOAO:

3/8" ROD	610 LBS
1/2" ROD	1130 LBS
5/8" - 7/8" RODS	1365 LBS

TYPE E

M00007D7

TABLE A

PIPE SIZE	DESIGN WEIGHT	ROD SIZE BASED ON SINGLE ROD SEE NOTE 1.	MAXIMUM SPAN, IN FEET, FOR PIPES NOT IN RACKS SEE NOTE 2.			
			STEEL	COPPER	PLASTIC SEE NOTE 3.	CAST IRON SEE NOTE 4.
3/B" TO 3/4"	27S LBS 3/B"	3/B"	5	S	CONTINUOUS	-----
1"	275 LBS 3/8"	3/B"	7	6	S	----
1 1/4"	300 LBS 3/8"	3/B"	7	7	5	----
1 1/2"	300 LBS 3/B"	3/B"	9	B	5	----
2"	32S LBS 3/B"	3/B"	10	B	B	PRESSURE
2 1/2"	375 LBS 1/2"	1/2"	10	9	6	PIPE 12 FT
3"	S75 LBS 1/2"	1/2"	10	10	7	SOIL PIPE
4"	600 LBS 5/B"	5/B"	10	10	7	10 FT.

NOTES TABLE A:

1. ROD SIZE IS BASED ON CARRYING SINGLE PIPE. WHEN MORE THAN ONE PIPE IS TO BE SUPPORTEO. ROOS SHALL BE SIZEO USING OESIGN WEIGHTS TO OETERMINED TOTAL LOAD.
2. WHERE MODULARLY SPACED INSERTS ARE REQUIRED SUPPORT PIPES AT INSERT MOOULE NO SPECIAL INSERT WILL BE ALLOWED FOR INDIVIDUAL PIPE SUPPORTS UNLESS SPECIFICALLY DETAILEO OR AUTHORIZED BY THE ENGINEER.
3. SPACING BASED ON SCHEDULE BO PIPE AT A 1DD° F. SCHEDULE 40 PIPE OR HIGHER TEMPERATURES REQUIRE SHORTER SPANS. SEE MANUFACTURERS RECOMMENOATIONS.
4. INSTALL AT LEAST ONE HANGER PER PIPE LENGHT. LOCATE AS NEAR THE BELL AS POSSIBLE.
5. SEE TYPICAL SUPPORT ROO FOR PIPES SUBJECT TO HORIZONTAL MOVEMENT. (SERVICE TEMPERATURES 33° - S9° AND 120° - 450° F.)
6. USE TURNBUCKLE, MSS TYPE 13, FOR PIPE ATTACHMENTS III AND VII.
7. DESIGN WEIGHTS REFER TO THE PIPE SIZE SHOWN SUPPORTED AT THE SPACING LISTEO AND SHALL BE USE FOR DEISIGN ALL SPECIAL HANGER SYSTEMS.

TABLE B

SERVICE CONDITION	PIPE ATTACHMENTS X INOICATES PIPE ATTACHMENTS SUITABLE FOR CONDITIONS IN SERVICE CONDITIONS COLUMN															
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV	XV	XVI
SERVICE TEMPERATURE																
33° - 59° F INSULATED OR				X	X	X	X	X	X			X		X		X
120° - 450° F UNINSULATED	X	X	X	X	X			X	X	X	X	X	X	X		X
60° - 119° F UNINSULATEO	X	X		X	X					X	X		X	X	X	X
PIPING MATERIALS																
STEEL	X	X	X	X	X	X		X	X	X	X	X	X	XX		X
COPPER		X*					X	X*	X*	X*	X*	X*	X*	X*		
PLASTIC	X	X								X	X		X			X
CAST IRON	X	X	X					X	X	X	X	X	X	X	X	X

NOTES TABLE B:

1. ASTERISK INOICATE PIPE ATTACHMENTS THAT REQUIRE SPECIAL TREATMENT WHEN USEO WITH COPPER PIPE. REFER TO INDIVIOUAL OETAILS
2. FOR SERVICE OTHER THAN THOSE SHOWN IN TABLE B, PIPE ATTACHMENTS SHALL BE AS SELECTED BY ENGINEER.

NOTES (STRUCTURAL ATTACHMENTS)

1. LOAOS FOR SIZING ALL COMPONENTS SHALL BE DETERMINED FROM THE OESIGN LOAOS SHOWN IN TABLE A.
2. WHEN SUPPORTING PIPING REQUIRING HORIZONTAL FLEXIBLITY NORMAL TO THE BEAM'S AXIS. USE STRUCTURAL ATTACHMENT TYPE E ANO F. TYPE H SHALL BE USE FOR PARALLEL FLEXIBLITIY.
3. STRUCTURAL ATTACHMENT SHALL BE SPACING AS REQUIRED BUT NOT TO EXCEED SPANS IN TABLE A.

M0000701
MARCH 19,1987

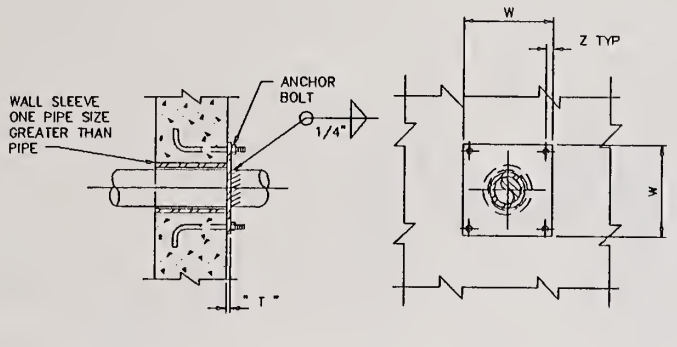
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DESIGNED ____ DATE ____
CHECKED ____ DATE ____
REVIEWED ____ DATE ____

MISC. MOUN[illegible] & TABLES

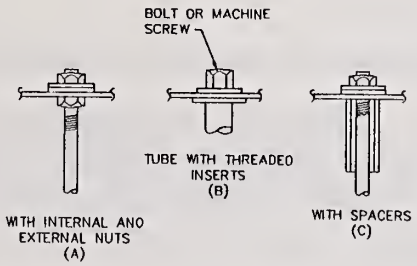
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OF



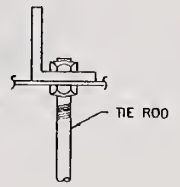
PIPE DIA	T	W	Z	ANCHOR BOLTS
4" & LESS	1/4"	7"	1"	5/8"

PIPE ANCHOR THRU WALL OR CEILING DETAIL (A)

NO SCALE M0000703

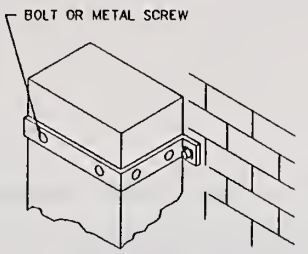


METHODS OF ATTACHING RODS TO THE DUCT WALL OR TO A REINFORCEMENT AND THE DUCT WALL USING LOCK NUTS. WHEN A REINFORCEMENT IS PRESENT THE ROD MAY NOT ATTACH TO THE DUCT WALL ALONE.

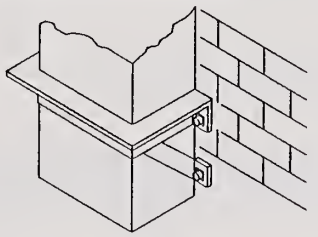


ROD DETAILS

M0000702

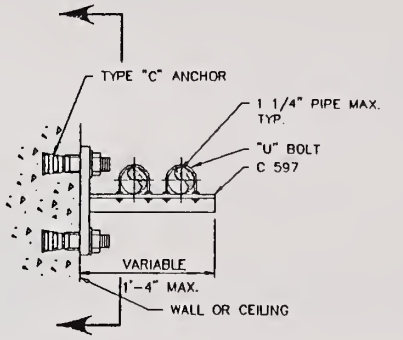


MAX. SIDE OF DUCT	SUPPORT	VERTICAL SPACING
TO 24"	1" x 1/8" STRAP	12'-0" O.C.
OVER 24"	1" x 1" x 1/8" ANGLE	12'-0" O.C.
OVER 36"	1 1/8" x 1 1/8" x 1/8" ANGLE	12'-0" O.C.
OVER 48"	1 1/2" x 1 1/2" x 1/8" ANGLE	12'-0" O.C.
OVER 60"	2" x 2" x 1/8" ANGLE	12'-0" O.C.



VERTICAL DUCT SUPPORT

NO SCALE M0000708



PIPE ANCHOR DETAIL (B)

NO SCALE M0000704

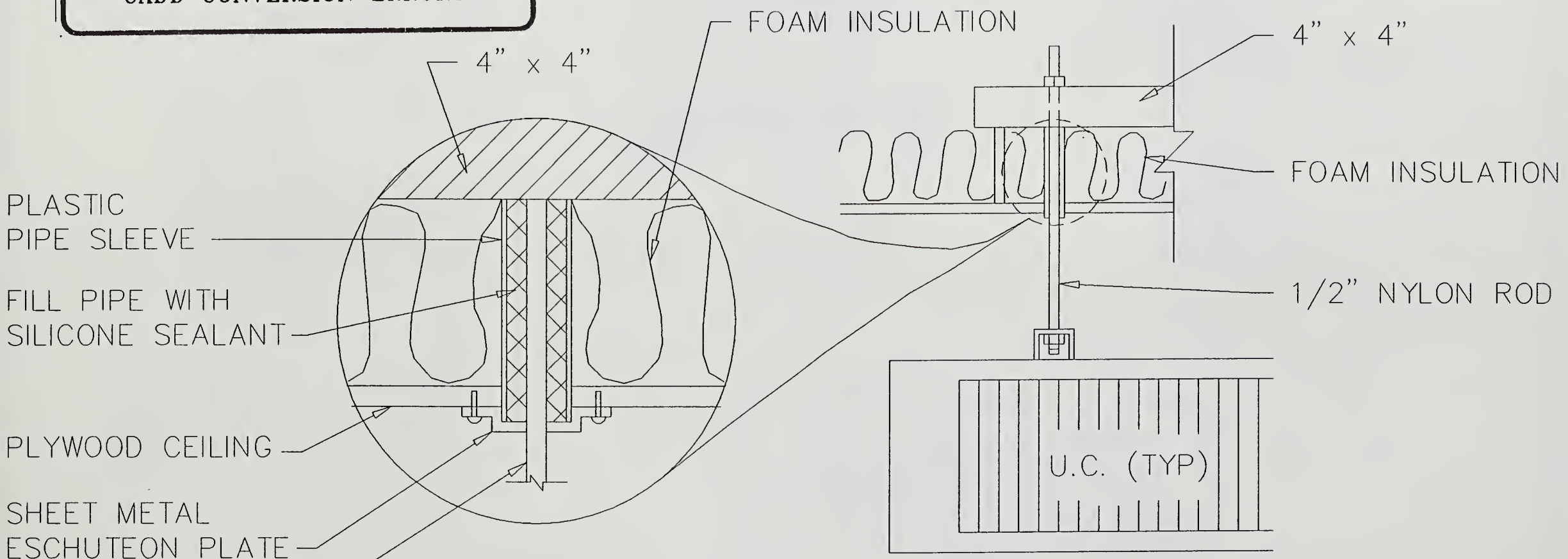
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M0000700
MARCH 19,1987

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DESIGNED	DATE	SHT.
CHECKED	DATE	OF
REVIEWED	DATE	

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UNIT COOLER HANGING DETAIL

NO SCALE

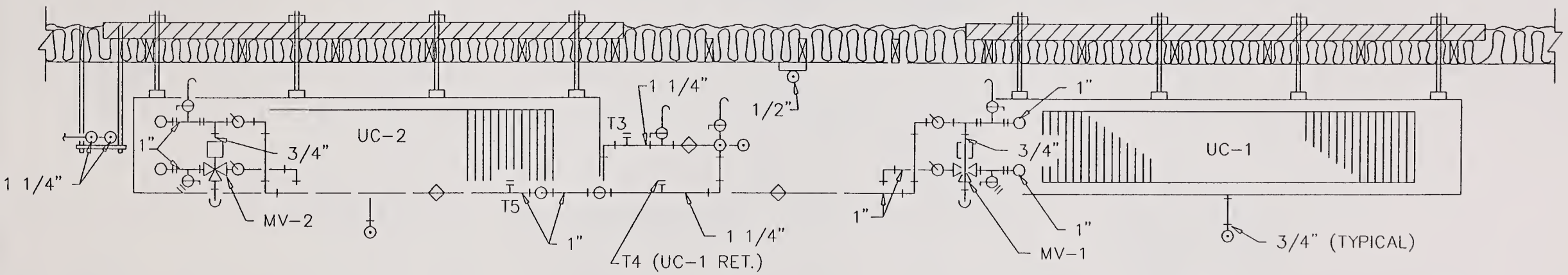
3-2888

M0000609

NO SCALE

M0000609

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

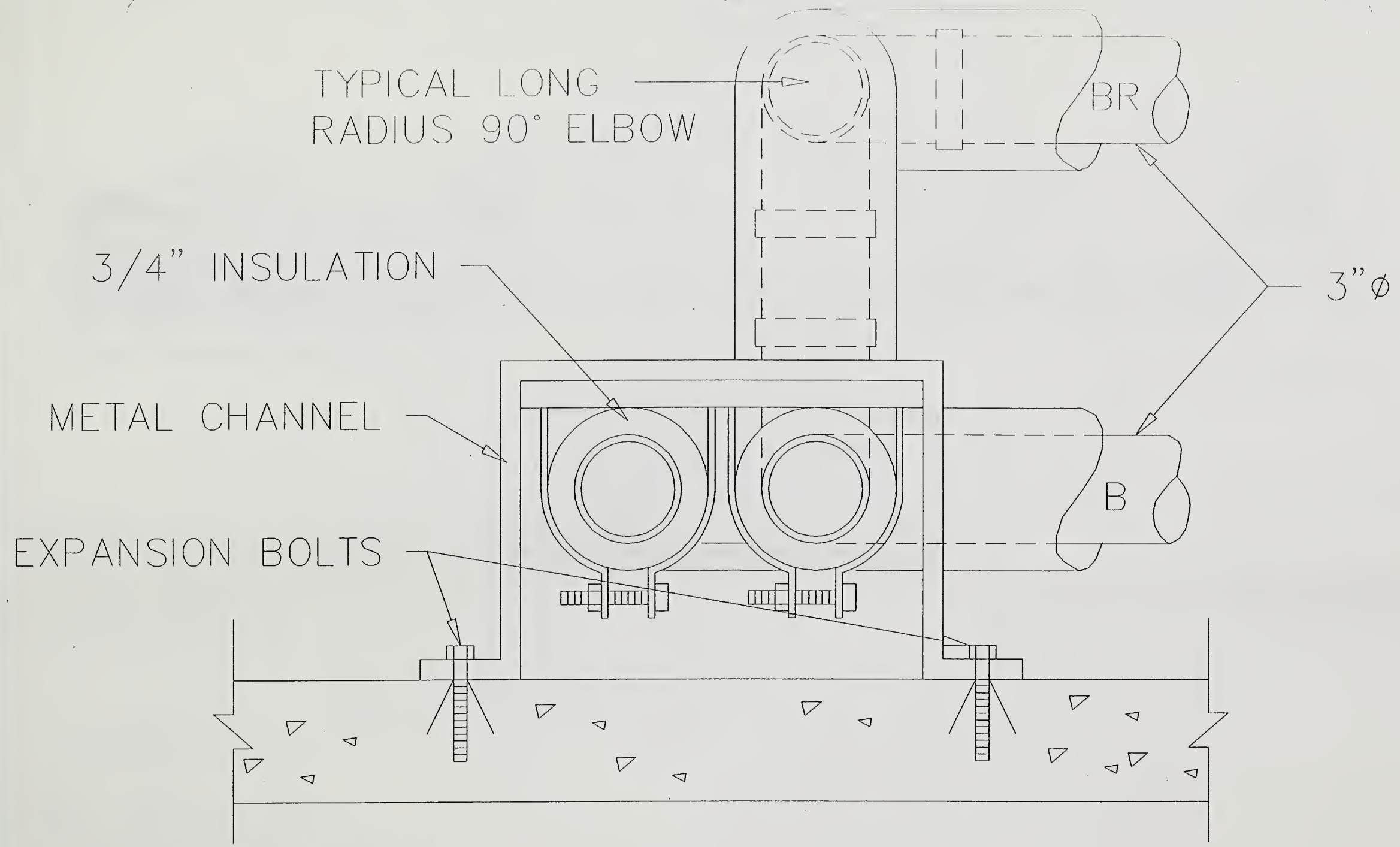


SECTION D

SCALE: 1/2"=1'-0"

3-28-88

M0000606



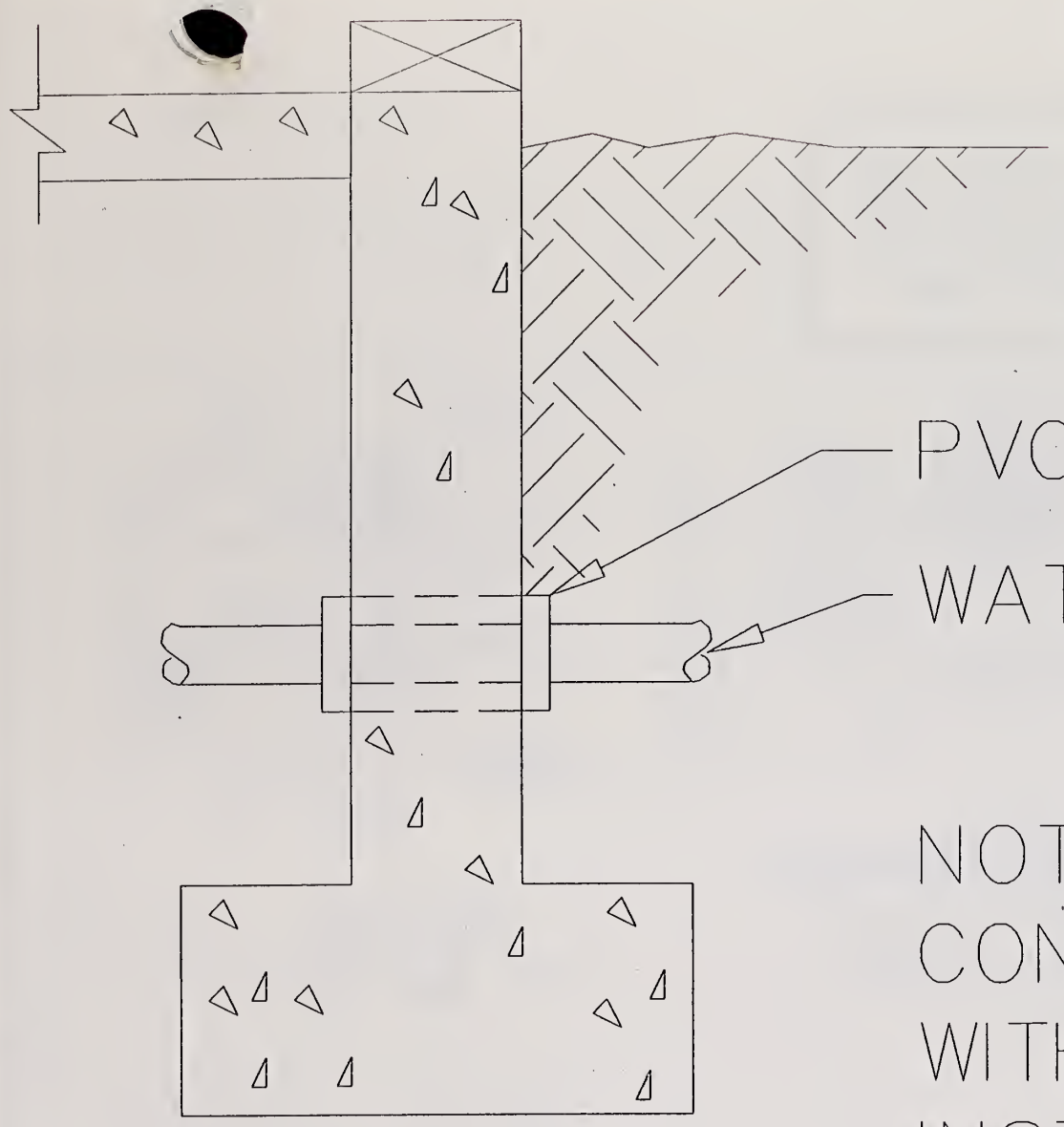
THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

SECTION E

N/O SCALE

3-28-88

M0000605



THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

PVC PIPE SLEEVE

WATER OR WASTE PIPING

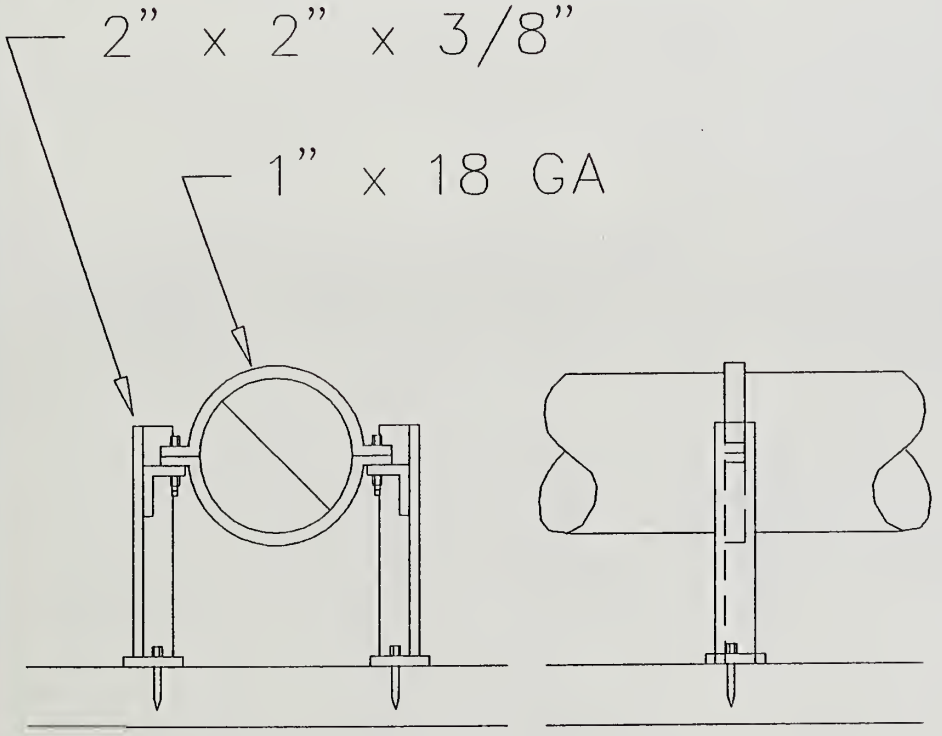
NOTE: ALL PENETRATIONS OF CONCRETE AND /OR ALL PIPING WITHIN CONCRETE TO BE INSTALLED IN SLEEVES.

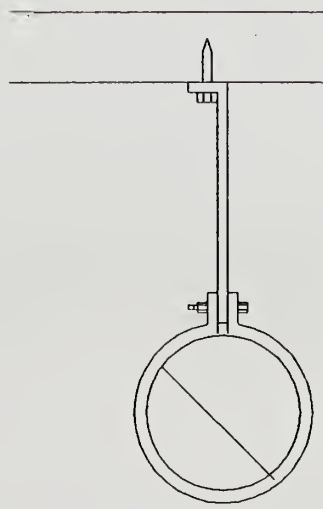
FOOTING SLEEVE DETAIL

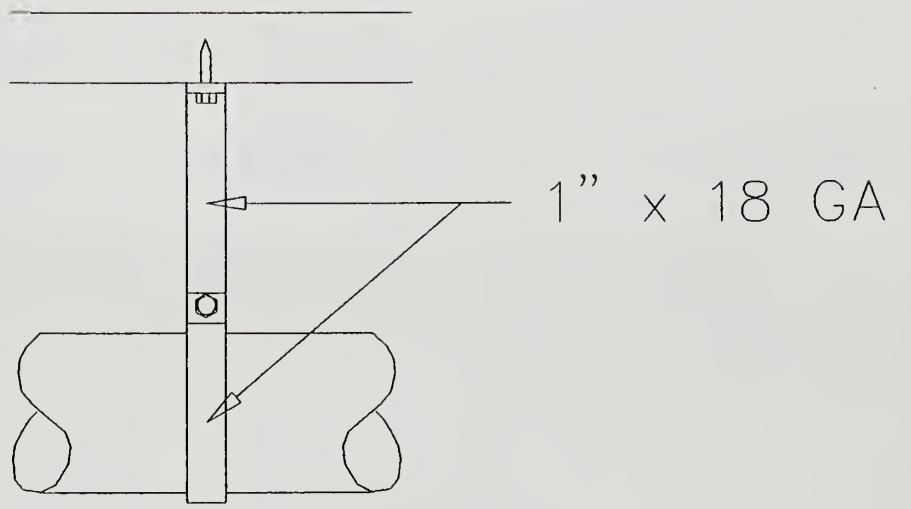
NO SCALE

3-28-88
M0000603

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ROUND-DUCT HANGER DETAILS 4

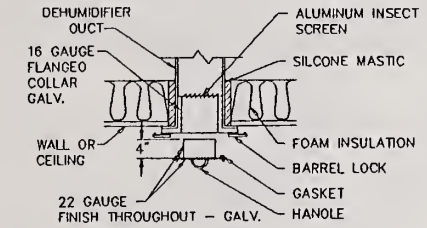
NO SCALE

3-28-88

M0000602

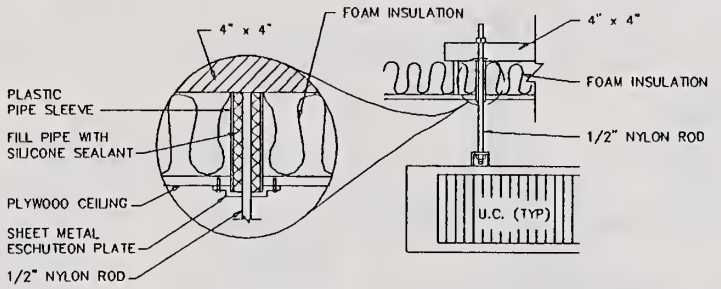
M0000602

THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.



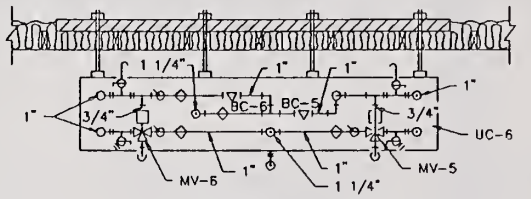
DUCT CAP SECTION DETAIL

NO SCALE M0000611



UNIT COOLER HANGING DETAIL

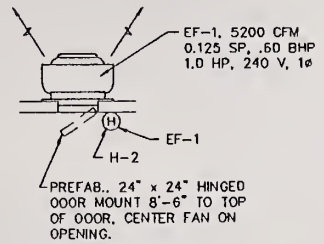
NO SCALE M0000609



SECTION B

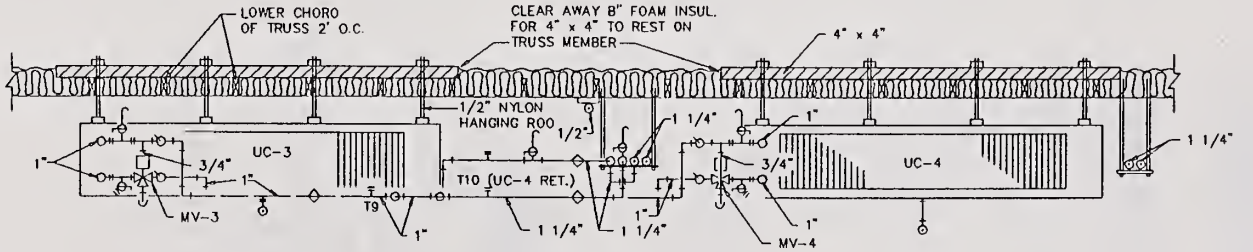
SCALE: 1/2"=1'-0"

M0000608



MOUNT DETAIL

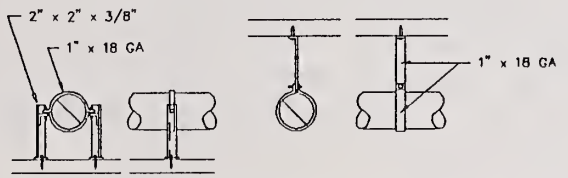
NO SCALE M0000610



SECTION C

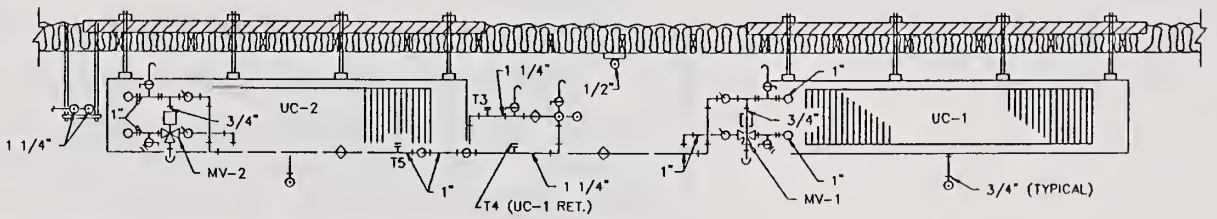
SCALE: 1/2"=1'-0"

M0000607



ROUND-DUCT HANGER DETAILS 4

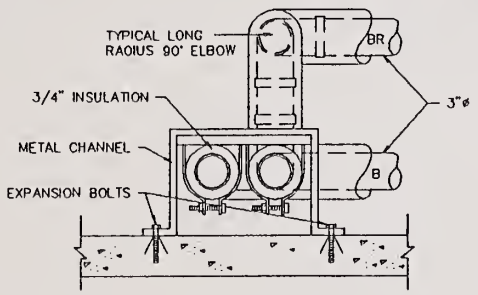
NO SCALE M0000601



SECTION D

SCALE: 1/2"=1'-0"

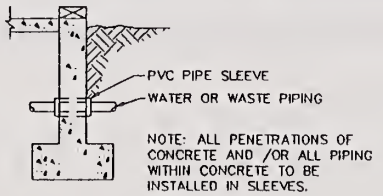
M0000606



SECTION E

NO SCALE

M0000605



NOTE: ALL PENETRATIONS OF CONCRETE AND /OR ALL PIPING WITHIN CONCRETE TO BE INSTALLED IN SLEEVES.

FOOTING SLEEVE DETAIL

NO SCALE M0000603

NOTES:

1. HANG PIPING AT ELEVATIONS SHOWN IN DETAILS. HIGHEST POINTS TO BE PROVIDED WITH MANUAL AIR RELEASE VALUES.

2. SLOPE HORIZONTAL RUNS 1/8" PER FOOT BACK TO MECHANICAL ROOM. (INCLUDES DRAINS)

M0000600
MARCH 13,1987

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

DRAWN ____ DATE ____
DESIGNED ____ DATE ____
CHECKED ____ DATE ____
REVIEWED ____ DATE ____

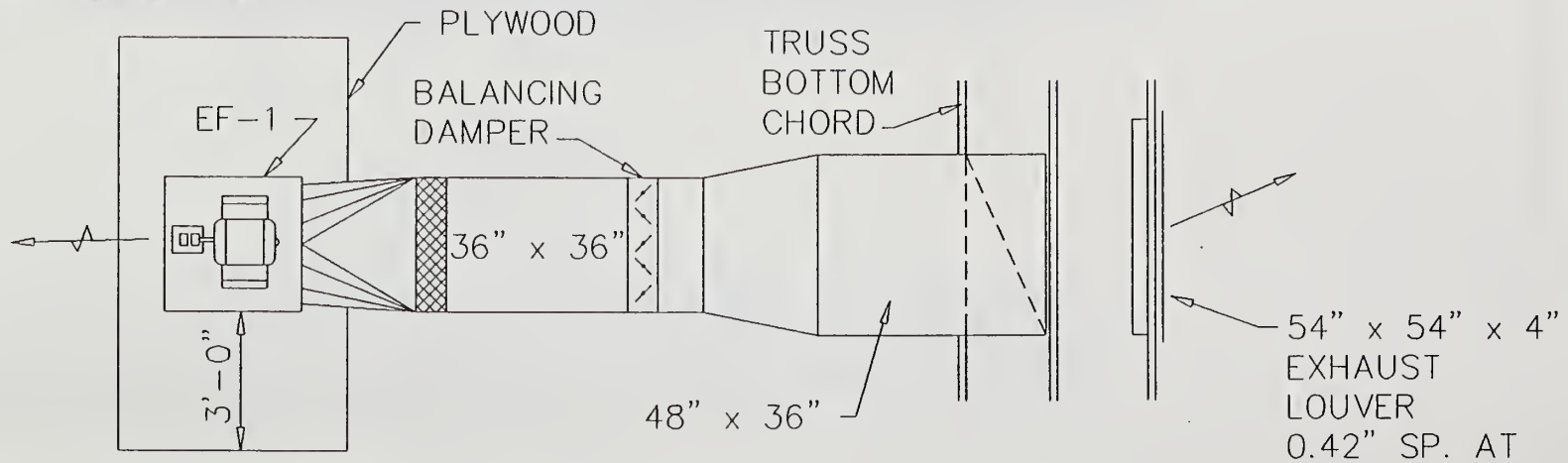
PROSPECT TREE COOLER

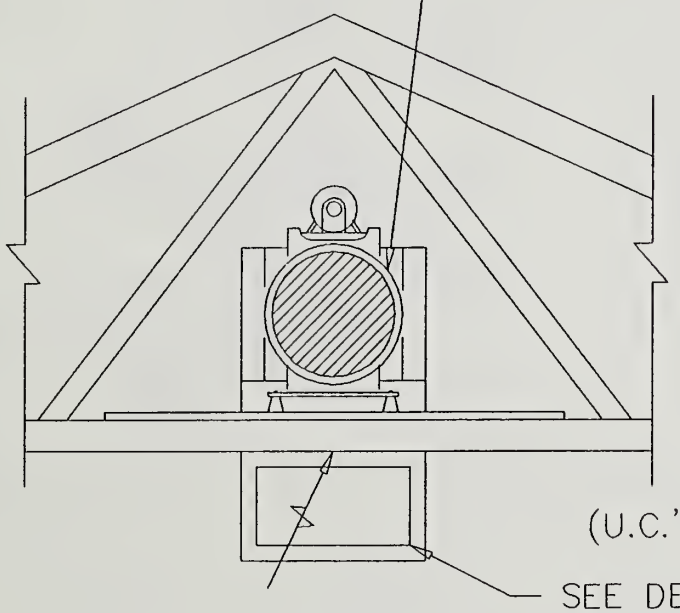
MECHANICAL ROOM PIPING AND MISC. DETAILS

SHT. ____ OF ____

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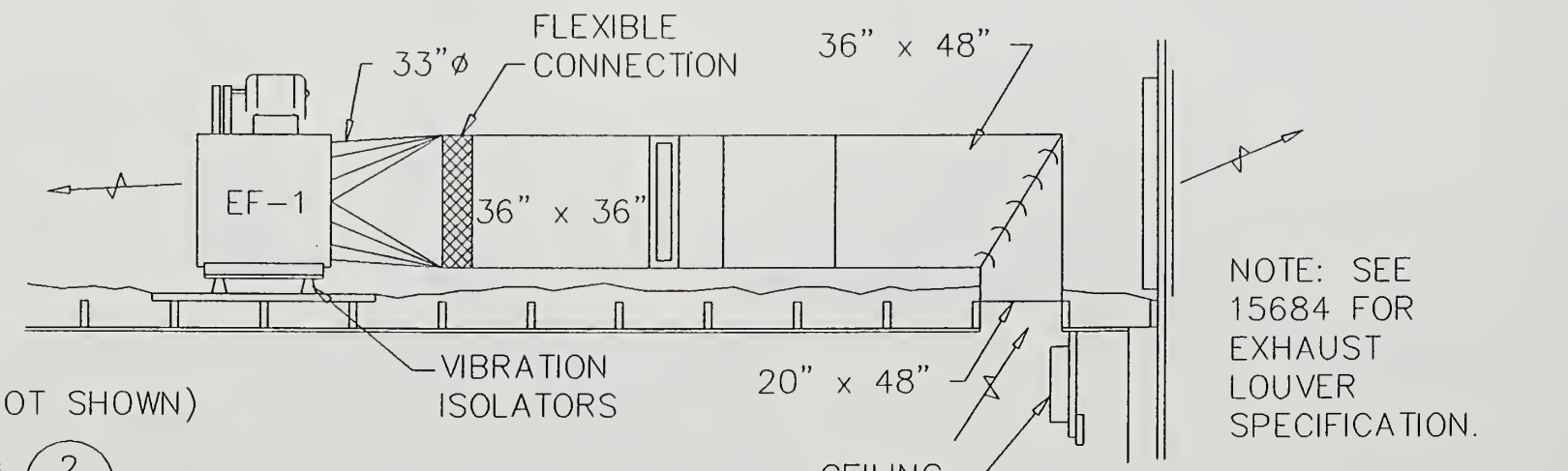
EF-1, VANEAXIAL, BELT DRIVEN
33" IMPELLER, 20,200 CFM, 1 3/4" SP,
11.3 BHP, 1739 RPM, 3400 FPM O.V.,
INLET & OUTLET DIAMETER 33". 15 HP,
460 V, 3ø TEFC. BELT GUARD,
DISCHARGE OUTLET GUARD,
700 LBS OPER. WGT.





(U.C.'S NOT SHOWN)

SEE DETAIL 2



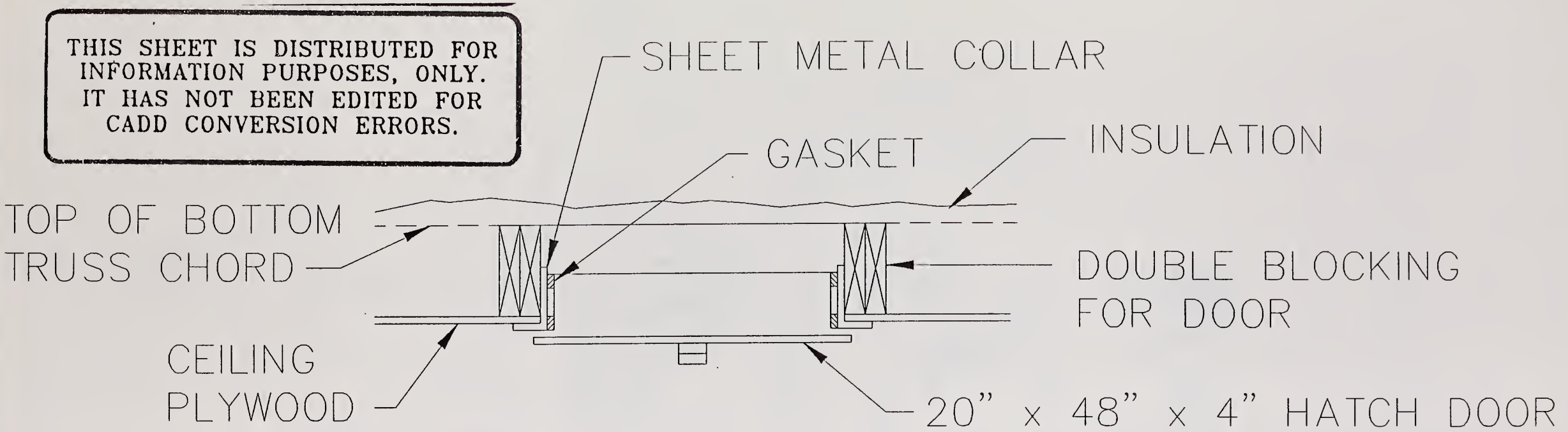
NOTE: SEE 15684 FOR EXHAUST LOUVER SPECIFICATION.

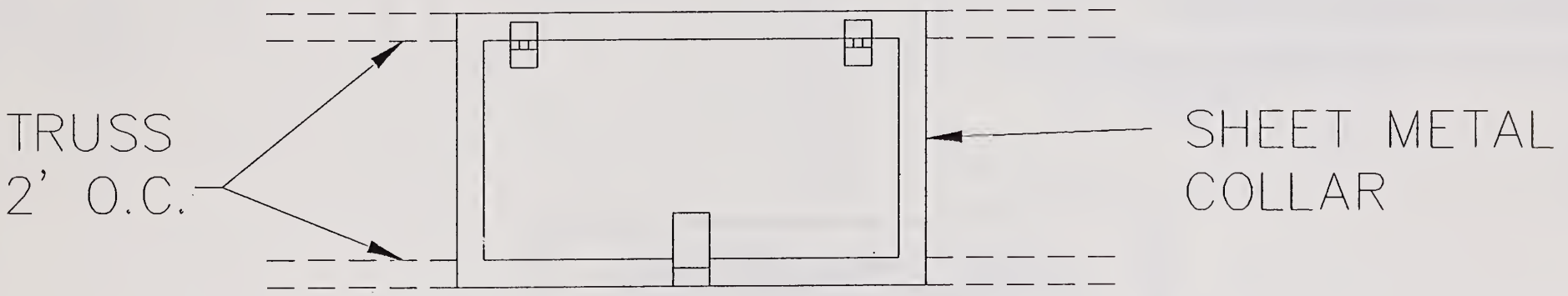
EXHAUST AIR SYSTEM DETAILS 4

SCALE: 1/4"=1'-0"

M0000505

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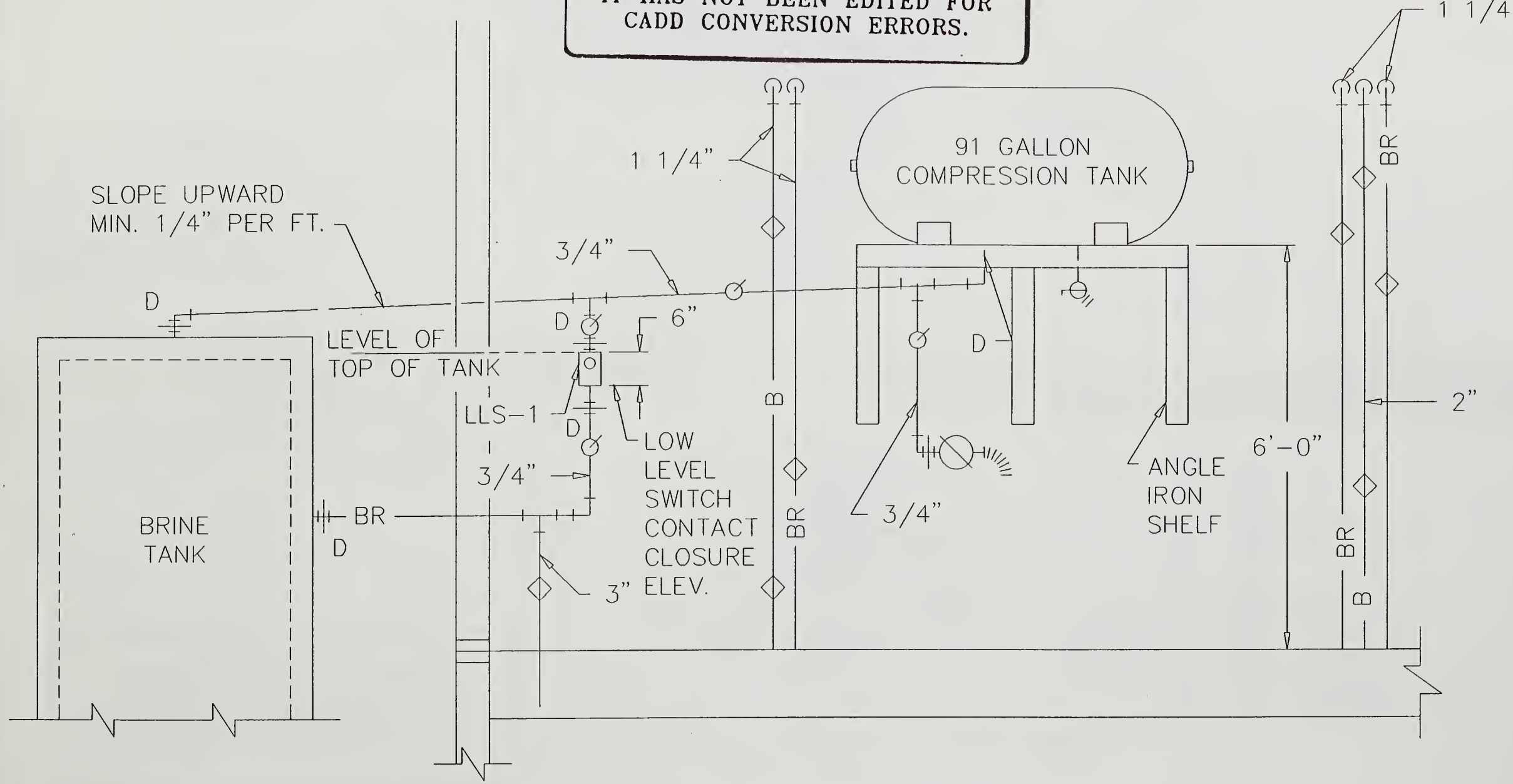




CEILING DOOR DETAIL (2)

NO SCALE M0000503 3-28-88

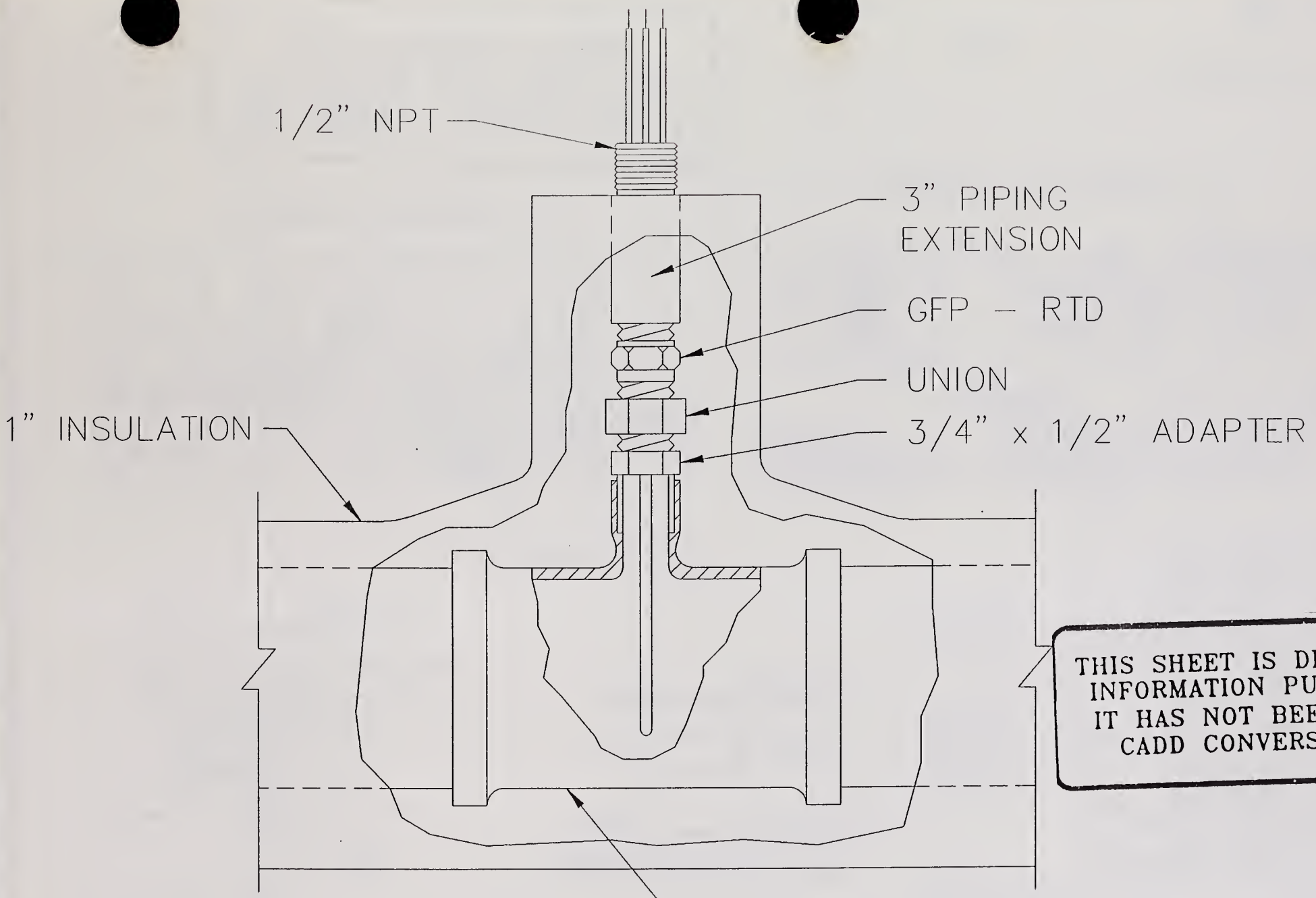
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MECHANICAL MEZZANINE DETAIL 3

SCALE: 1/2"=1'-0"

M0000504 3-28-88



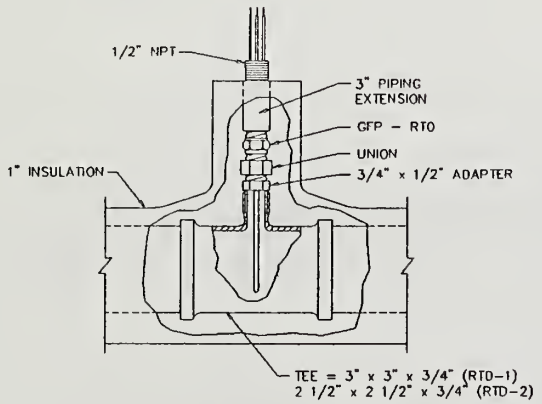
THIS SHEET IS DISTRIBUTED FOR INFORMATION PURPOSES, ONLY. IT HAS NOT BEEN EDITED FOR CADD CONVERSION ERRORS.

GLYCOL PIPING RTD DETAIL 1

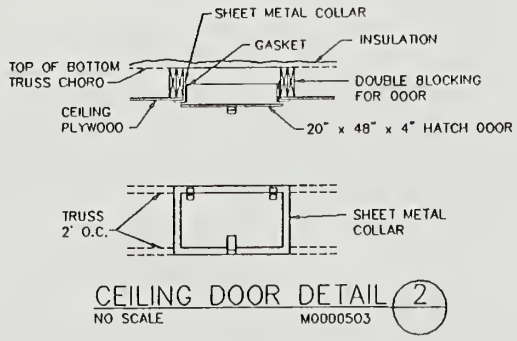
NO SCALE

3-28-88

M0000502

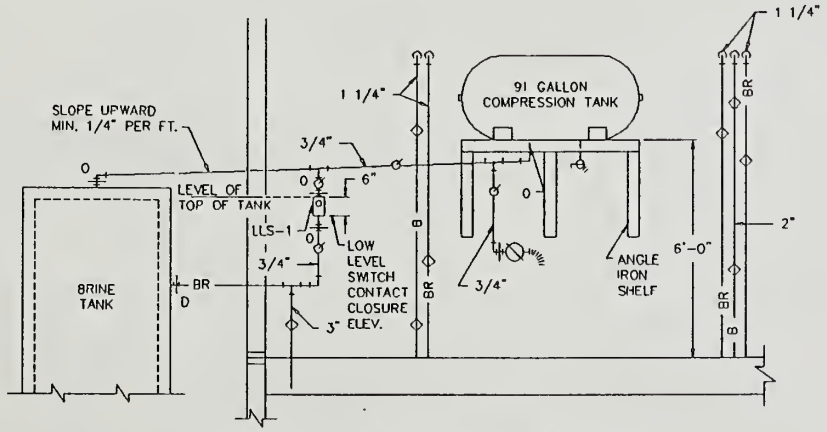


GLYCOL PIPING RTD DETAIL (1)
NO SCALE M0000502

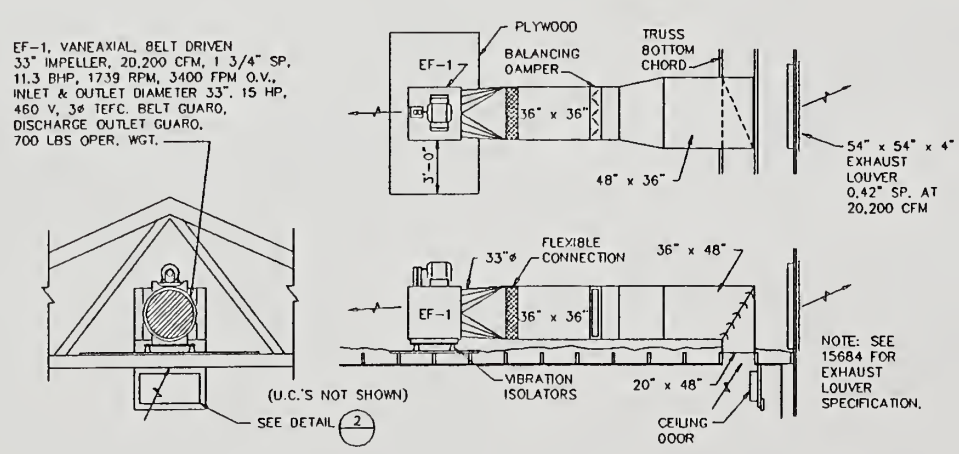


CEILING DOOR DETAIL (2)
NO SCALE M0000503

VALVE SCHEDULE							
TYPE	DESIG	SIZE	GPM	MIN. Cv	MAX. PSID (40% EG)	PSIG RANGE (40% EG)	REMARKS
PROPORTIONING 3-WAY	PV-A	1 1/2"	22.5	25	–	–	MOTORIZED SEE 156844
	PV-B	1 1/2"	22.5	25	–	–	
	PV-C	1 1/2"	22.5	25	–	–	
FLOW CONTROL	FCV-1	1 1/2"	22.5	–	–	2-32	MECHANICAL SEE 15684 THREADED HIGH CAPACITY GRISWOLD OR EQUAL. MOTORIZED SEE 15684
	FCV-2	1 1/2"	22.5	–	–	2-32	
	FCV-3	1 1/2"	22.5	–	–	2-32	
	FCV-4	2"	45.0	–	–	4-57	
	FCV-5	1 1/2"	23.3	–	–	4-57	
2 POSITION 3-WAY	MV-1	1 1/2"	11.25	25	–	–	
	MV-2	1 1/2"	11.25	25	–	–	
	MV-3	1 1/2"	11.25	25	–	–	
	MV-4	1 1/2"	11.25	25	–	–	
	MV-5	1 1/2"	11.25	25	–	–	
	MV-6	1 1/2"	11.25	25	–	–	
CHECK	CV-1	3"	114.0	–	0.7	–	SILENT
	CV-2	3"	114.0	–	0.7	–	SILENT
	CV-3	1 1/2"	22.5	–	0.6	–	ALL POSITION
	CV-4	1"	22.5	–	2.7	–	ALL POSITION
	CV-5	1 1/2"	22.5	–	0.6	–	ALL POSITION
	CV-6	1"	22.5	–	2.7	–	ALL POSITION
	CV-7	1 1/2"	22.5	–	0.6	–	ALL POSITION
	CV-8	1"	22.5	–	2.7	–	ALL POSITION
	CV-9	2"	68.8	–	2.5	–	ALL POSITION



MECHANICAL MEZZANINE DETAIL (3)
SCALE: 1/2"=1'-0" M0000504



EXHAUST AIR SYSTEM DETAILS (4)
SCALE: 1/4"=1'-0" M0000505

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M0000500
MARCH 16,1987

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
THE PACIFIC NORTHWEST REGION

DRAWN DATE
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

PROSPECT
TREE COOLER
R
SHT.
OF

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M0000500
MARCH 16,1987

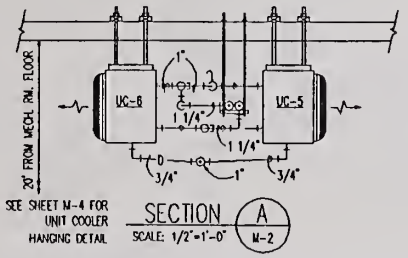
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

DRAWN DATE
DESIGNED DATE
CHECKED DATE
REVIEWED DATE

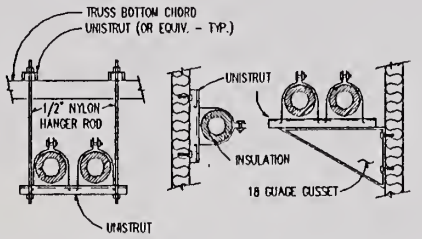
PROSPECT TREE COOLER

SHT

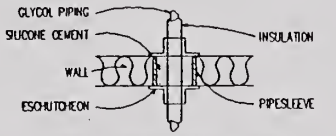


SEE SHEET M-4 FOR UNIT COOLER HANGING DETAIL

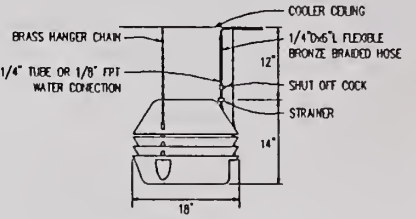
SECTION (A) M-2
SCALE: 1/2"=1'-0"



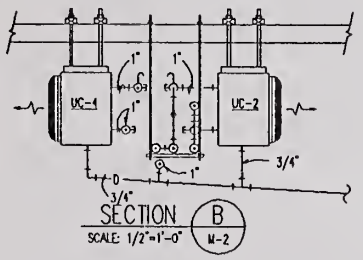
GLYCOL PIPING SUPPORT DETAILS (1) M-2
NO SCALE



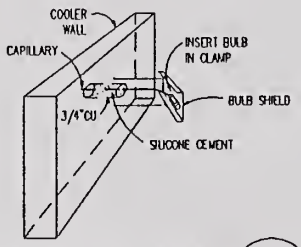
WALL PENETRATION DETAIL (TYP.)
NO SCALE



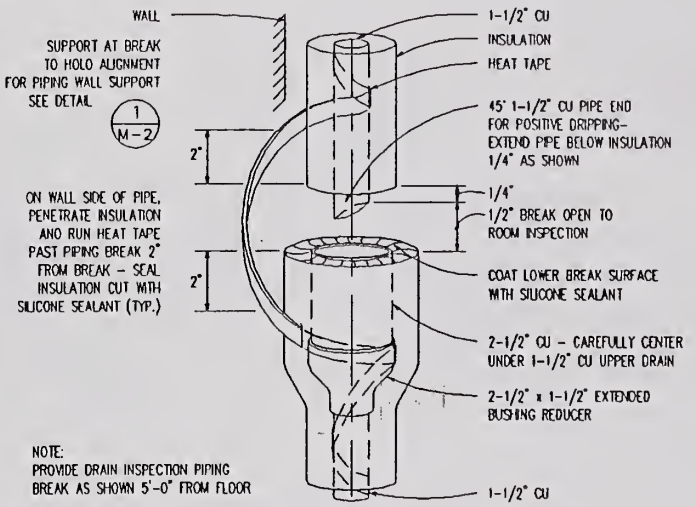
HUMIDIFIER DETAIL (2) M-2
NO SCALE



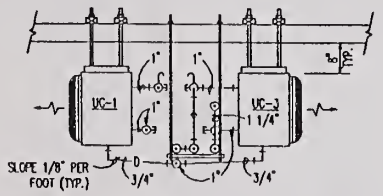
SECTION (B) M-2
SCALE: 1/2"=1'-0"



REMOTE BULB DETAIL (2) M-2
NO SCALE



UNIT COOLER DRAIN DETAIL (3) M-2
NO SCALE



SECTION (C) M-2
SCALE: 1/2"=1'-0"

3/30/87
M0000401

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

THE PACIFIC NORTHWEST REGION

DRAWN DATE
DESIGNED DATE
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PROSPECT TREE COOLER

DETAILS

SHT.
OF